SAMSUNG
SCM7500

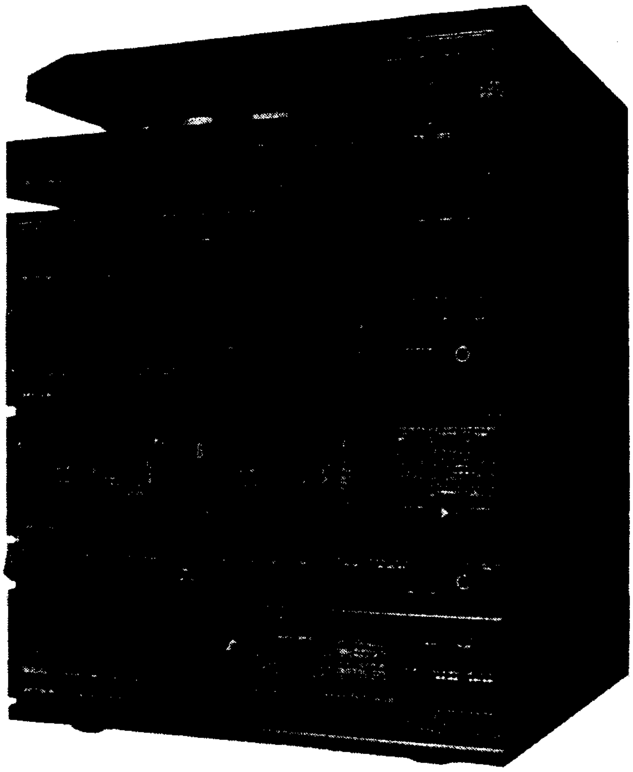
Service Manual

Technischer Kundendienst

Technische Unterlage

036.443 0

B.VERSION



BESTELL-NR.	0364430
GERAETEBEZEICHNUNG	UNIV.-MUSIK-CENTER
WARENGATTUNG	652
AUSFUEHRUNGS-NR.	001
GERAETEBESCHREIBUNG	2X45W,MIT BOXEN
PRIVILEG	VTCFCD4676 -B
LIEFERANTEN-NR.	205476
PREIS	998.00
KATALOG	872-872
GARANTIEZEIT	6
KD-SEKTOR	R
HEIM/BRINGE	WERKSTATT
BETREUUNG	EIGEN
KOSTENTRAEGER	EIGEN
REPARATURFAEHIG	JA

Bei allen Reparaturen sind die gültigen Sicherheitsvorschriften zu beachten!

ZEILE	POSITION	SYM BEZEICHNUNG	ET-NUMMER
1			
2		JEDE TKD-STELLE HAT EIN ORIGINAL	
3		SERVICE MANUAL SCM 7500 L FUER	
4		036.443 VTCF 4676 "B" ERHALTEN.	
5			
6		FOLGENDE TEILE HABEN SICH BEI	
7		DER "B" VERSION GEAENDERT.	
8			
9		GEHAEUSE UND BEDIENTEILE :	
10			
11	1	FRONTBLENDE	742 356 9
12	8	ABDECKSCHEIBE,CD-PLAYER	742 362 7
13	10	ZIERLEISTE,UNIVERSUM,TUNER	742 364 3
14	11	ZIERLEISTE,UNIVERSUM,VERSTAERKER	742 365 0
15	12	ZIERLEISTE,CASS.-FACH "A"	742 367 6
16	15	ZIERLEISTE,UNIVERSUM,CD-PLAYER	742 366 8
17	64	FILTERSCHEIBE,DISPLAY-CD	742 363 5
18			
19		CD-PLAYER :	
20			
21		KNOPF,PROGRAMM	742 351 0
22		KNOPF,PLAY-PAUSE	742 357 7
23		KNOPF,STOP-CLEAR	742 358 5
24		KNOPF,DISPLAY	742 352 8
25		KNOPF,SKIP-RUECKWAERTS	742 359 3
26		KNOPF SKIP,VORWAERTS	742 353 6
27		KNOPF,REPEAT	742 360 1
28		KNOPF SEARCH,RUECKWAERTS	742 354 4
29		KNOPF,SEARCH-VORWAERTS	742 361 9
30			
31	F3001	DISPLAY LC 204 MB-2	741 953 4
32	IC3001	IC LC 6520 H 3396	741 950 0
33		LASER-EINHEIT MLP-7	740 023 7
34	ODER	LASERABTASTEINHEIT MLP-9	741 790 0
35	X3001	KERAMIK-RESONATOR CSA 4.00 MHZ	741 960 9
36			
37		ALLE ANDEREN TEILE SIND GLEICH	
38		MIT DER ERSTEN VERSION.	

ENDE

LOCATION NO.	IC2109 (NJM 2068SD)								
PIN NO.	1	2	3	4	5	6	7	8	9
VOLTS	11.5	0	0	0	-11.5	0	0	0	11.5

LOCATION NO.	IC2111 (TA75393S)								
PIN NO.	1	2	3	4	5	6	7	8	9
VOLTS	5	5	-0.4	-0.2	-6	-0.2	0	-6	5

LOCATION NO.	IC2113 (NJM2068SD)								
PIN NO.	1	2	3	4	5	6	7	8	9
VOLTS	6	3	3	3	6	-3	-3	-3	-6

LOCATION NO.	E	B	C
Q2201	0	0	4.4
Q2301	0	-0.6	0
Q2302	0	0.7	0
Q2303	0	-0.6	0
Q2304	11.6	11	-0.5
Q2305	0	0	11
Q2306	0	0	11
Q2401	0	0	0
Q2402	0	-0.6	0

LOCATION NO.	IC 2110 (TA7256P)									
PIN NO.	1	2	3	4	5	6	7	8	9	10
VOLTS	0	0	0	0	-11.5	0	0	0	0	11.5

LOCATION NO.	IC2112(TA7256P)									
PIN NO.	1	2	3	4	5	6	7	8	9	10
VOLTS	0.2	0.2	0	0	-11.5	0	0	0	0	11.5

LOCATION NO.	IC2114 (JRC 6006)								
PIN NO.	1	2	3	4	5	6	7	8	9
VOLTS	6	0	0	0	-6	0	0	0	6

LOCATION NO.	E	B	C
Q2501	0	0.6	0
Q2502	0	0.6	0
Q2601	11.6	11	11.6
Q2602	16	15.5	16
Q2603	-17	-16.5	-17
Q2604	12.2	11.5	14.6
Q2605	-12.2	-11.5	-16.5
Q2606	6	8.6	6.7
Q2607	-6.2	-6.9	-8

LOCATION NO.	E	B	C
Q2608	-0.5	-1.2	-11.5
Q2701	1.2	1.6	5
Q2702	1.2	1.6	5
Q2703	0	0	5
Q2801	0	0.7	0
Q2802	0	0	11.1
Q2803	0	0	11.1
Q2804	11.6	11.1	11.1
Q2805	11.6	11.1	11.1

B. CDP PART

LOCATION NO.	IC 2101 (SONY 6305)																							
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
VOLTS	0	0	0	0	0	0	0	0	0	0	0	0	-6	0	0	0	0	0	-3.2	2.1	5	-2.5	5	6

LOCATION NO.	IC 2102 (YM 3805)																							
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
VOLTS	5	2.5	2.5	2.5	0	2.5	2.5	2.5	0	0	0	0	0	5	0	0	0	4.5	0	5	0	0	0	5
PIN NO.	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
VOLTS	0	0	2.2	1.8	0.4	4.8	0.4	5	4.5	2	0	0	5	0	5	2.5	0	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PIN NO.	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
VOLTS	2.5	2.5	4.8	3	2.5	3.8	3.8	3.8	3.2	3.4	1.5	4	1.8	5	4.5	2.5	0	0	2.5	2.5	4.5	4.5	4.5	5
PIN NO.	73	74	75	76	77	78	79	80																
VOLTS	3.5	4.5	5	1	1	0	1.8	2.2																

LOCATION NO.	IC 2104 (Y3015)															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
VOLTS	6	0	6	0	2.2	0	1	1	5	3	3	3	3	3	3	3

LOCATION NO.	IC 2105 (SC876109)																						
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
VOLTS	0	5	5	1.4	1	5	5	5	1	1.6	1.6	3.8	0.6	0.6	0.6	0.6	0.6	0.6	4	5	0	0	0
PIN NO.	24	25	26	27	28																		
VOLTS	0	5	0	0	4.4																		

LOCATION NO.	IC 2106 (NJM 2068SD)								
PIN NO.	1	2	3	4	5	6	7	8	9
VOLTS	6	3	3	3	-6	3	3	3	6

LOCATION NO.	IC 2107		
PIN NO.	IN		OUT
VOLTS	8	0	5

LOCATION NO.	IC 2108 (NJM 2068SD)								
PIN NO.	1	2	3	4	5	6	7	8	9
VOLTS	11.5	3	2.5	2.5	-11.5	5	5	-1	11.5

LOCATION NO.		E	B	C	LOCATION NO		S	D	G	LOCATION NO		E	B	C
Q1002	FM	4.9	4.6	0	Q1004	FM	3.9	0	1.1	Q1008	FM	0.8	0.8	0
	MW	4.9	4.6	4.9		MW	7.8	0	1		AM	0.8	0.8	0
Q1003	FM	4.9	4.6	4.9	Q1005	FM	0.4	0	1.0	Q1009	FM	0.8	0.8	0
	MW	4.9	4.6	0		MW	4.4	0	1		AM	0.8	0.8	0

LOCATION NO.	E	B	C	LOCATION NO	E	B	C	LOCATION NO.	E	B	C
Q1	0.2	0.5	4.1	Q1010	5	4.8	0	Q1012	0.7	0.8	4.9
Q1006	2.3	3.1	3.4	Q1011	0	0	0.7	Q1013	0	0	4.2

LOCATION NO	IC 601 (TA 7784P)															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TAPE PLAY (VOLTS)	7.2	2.2	0.2	2.2	2	2.2	2	0	2.2	0	2	2.2	2	2.2	0.2	2.2

LOCATION NO.	IC 803 (LC 4011)													
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
TAPE PLAY (VOLTS)	11.8	11.8	0	12	0	0	0	0	11.9	12	0	9.4	9.4	12

LOCATION NO.	IC 804 (LC 4011)													
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
TAPE PLAY (VOLTS)	0	0	11.9	0	11.9	11.8	0	0	0	11.9	0	0	11.9	12

LOCATION NO.	IC 802 (HD 14001 BP)													
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
TAPE PLAY (VOLTS)	0	0	12	0	11	0	0	11	0	0	0	0	8.5	12

TAPE PLAY

LOCATION NO.	E	B	C
Q801	4.8	4.8	0
Q802	0	0.3	0
Q803	0	-2.7	4.8
Q804	11	10	9.6
Q805	0	9.5	0
Q806	0	0	9.4
Q807	0	0	0
Q811	4.8	4.5	4.8
Q812	0	0.6	10
Q901	0	2.7	2.1
Q1401	0	0	0
Q1451	0	0	0
Q1601	0.8	1	1.8
Q1604	4.4	4.6	4.8
Q1605	0	0	0
Q1651	0.8	1	1.8
Q1655	0	0	0

LOCATION NO.	IC 402 (BA 3822L)																							
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
VOLTS	5.5	5.4	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	4	2.4	2.4	4	3	3	6.4	0

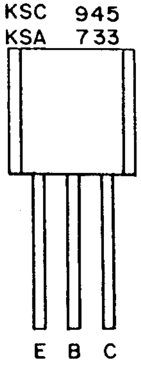
LOCATION NO.	IC51 (LA3160)							
PIN NO.	1	2	3	4	5	6	7	8
VOLTS	1.4	0.9	4.2	12.3	0	4	9	1.4

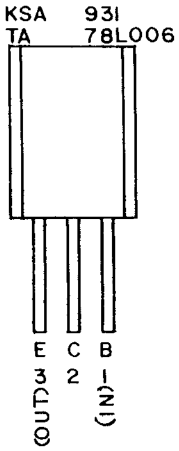
LOCATION NO.	IC 401 (4558)							
PIN NO.	1	2	3	4	5	6	7	8
VOLTS	0	0	0	-12.5	0	0	0	12.5

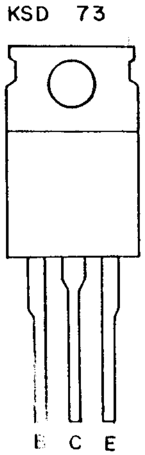
LOCATION NO.	IC 1401 (STK 412 II)																	
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
VOLTS	0	0	0	-14	-2	0	-19	-19.5	-19.5	0	19	15.5	0	-19.5	-2	0	0	0

LOCATION NO	IC 501 (4558)							
PIN NO.	1	2	3	4	5	6	7	8
VOLTS	0	0	0	-12.5	0	0	0	12.5

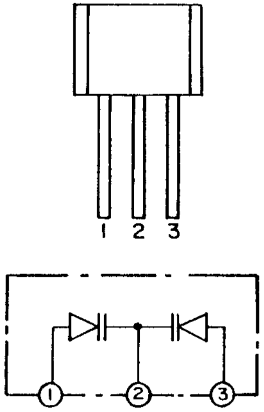
4. TRANSISTORS REGULATOR


KSC 945
KSA 733
E B C


KSA 931
TA 78L006
E C B
3 2 1
(OUT) G (IN)

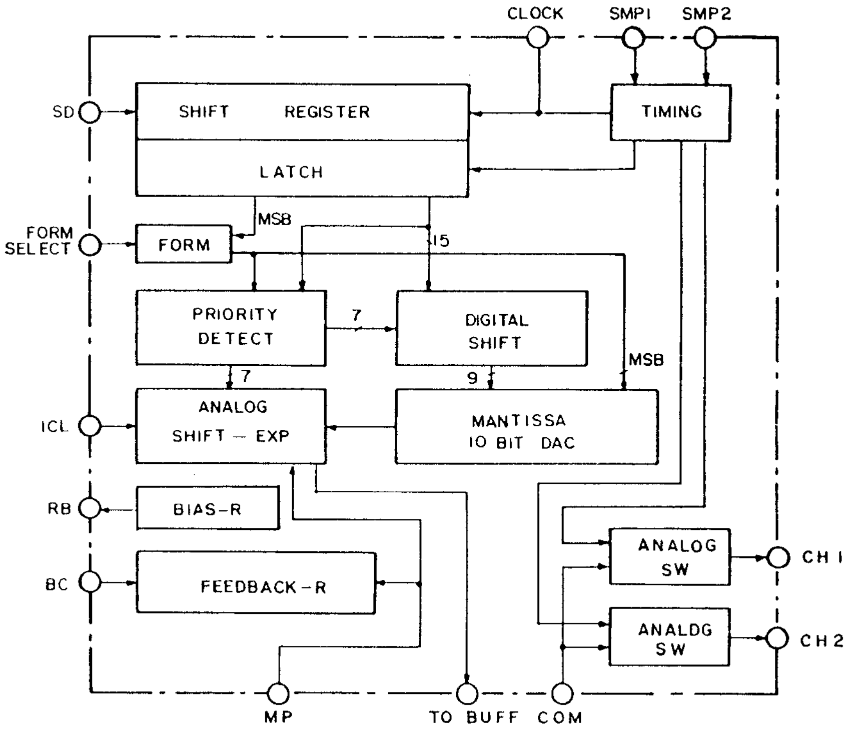


5. SVC-211 (VARICAP DIODE)

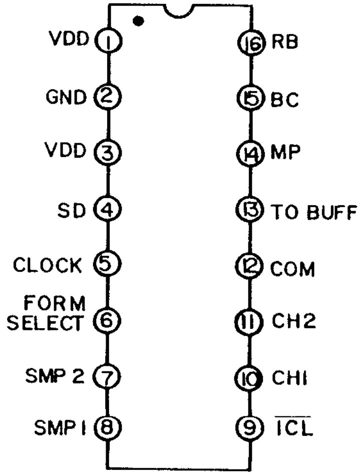


6. DIGITAL TO ANALOG CONVERTER (YM-3015)

A) BLOCK DIAGRAM

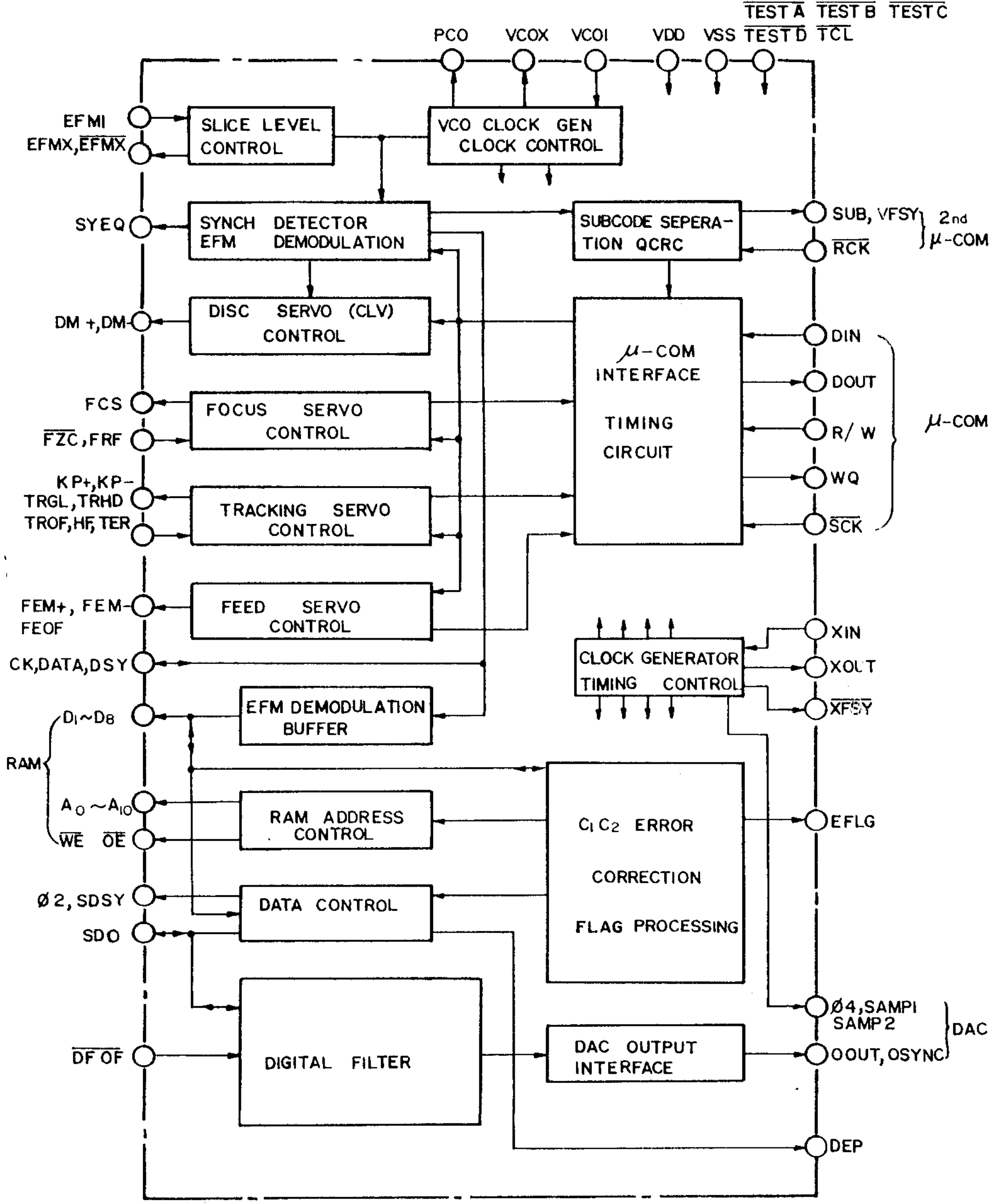

CLOCK
SMP1
SMP2
SD
SHIFT REGISTER
LATCH
TIMING
FORM SELECT
FORM
MSB
15
PRIORITY DETECT
7
DIGITAL SHIFT
MSB
7
9
ICL
ANALOG SHIFT – EXP
MANTISSA 10 BIT DAC
RB
BIAS-R
BC
FEEDBACK-R
ANALOG SW
CH1
ANALOG SW
CH2
MP
TO BUFF
COM

B) PIN ASSIGNMENT

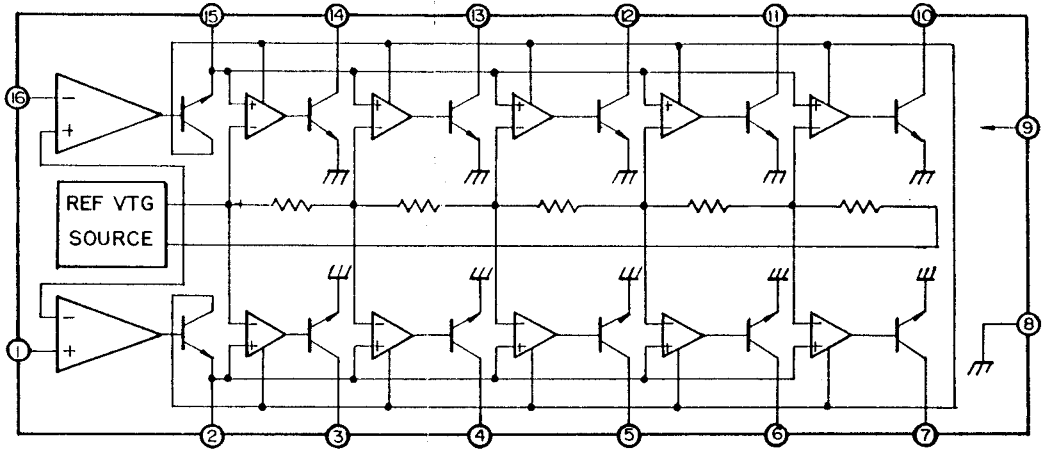

VDD ①
GND ②
VDD ③
SD ④
CLOCK ⑤
FORM SELECT ⑥
SMP 2 ⑦
SMP1 ⑧
⑯ RB
⑮ BC
⑭ MP
⑬ TO BUFF
⑫ COM
⑪ CH2
⑩ CH1
⑨ $\overline{\text{ICL}}$

9. TR & IC LEAD LAYOUT

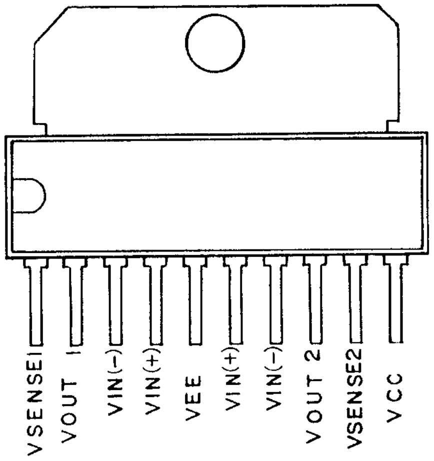
1. YM-3805 BLOCK DIAGRAM


PCO
VCOX
VCOI
VDD
VSS
TEST A
TEST B
TEST C
TEST D
TCL
EFMI
EFMX, EFMX
SLICE LEVEL CONTROL
VCO CLOCK GEN CLOCK CONTROL
SYEQ
SYNCH DETECTOR EFM DEMODULATION
SUBCODE SEPERATION QCRC
SUB, VFSY
RCK
2nd μ-COM
DM +, DM-
DISC SERVO (CLV) CONTROL
μ-COM INTERFACE
TIMING CIRCUIT
DIN
DOUT
R/W
WQ
SCK
μ-COM
FCS
FZC, FRF
FOCUS SERVO CONTROL
KP+, KP-
TRGL, TRHD
TROF, HF, TER
TRACKING SERVO CONTROL
FEM+, FEM-
FEOF
FEED SERVO CONTROL
CK, DATA, DSY
XIN
XOUT
XFSY
CLOCK GENERATOR TIMING CONTROL
D1~D8
RAM
EFM DEMODULATION BUFFER
A0 ~A10
WE
OE
RAM ADDRESS CONTROL
C1 C2 ERROR CORRECTION FLAG PROCESSING
EFLG
Ø 2, SDSY
SDO
DATA CONTROL
Ø4, SAMPI
SAMP 2
DAC
DF OF
DIGITAL FILTER
DAC OUTPUT INTERFACE
OOUT, OSYNC
DEP

2. TA7666P/KA2281

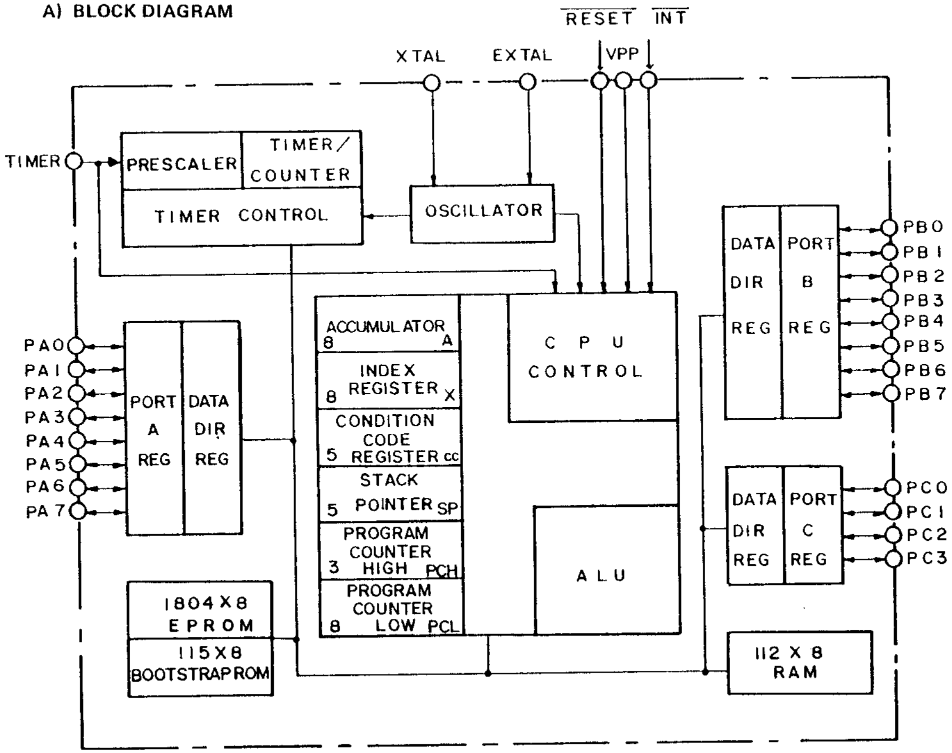

⑮
⑭
⑬
⑫
⑪
⑩
⑯
⑨
REF VTG SOURCE
①
⑧
②
③
④
⑤
⑥
⑦

3. TA7256P

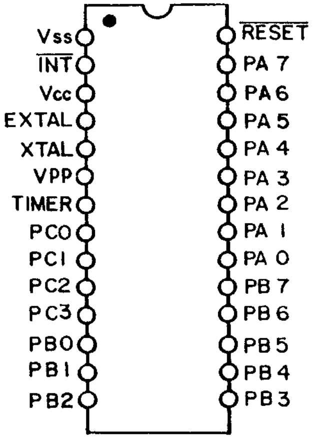

VSENSE1
VOUT 1
VIN(-)
VIN(+)
VEE
VIN(+)
VIN(-)
VOUT 2
VSENSE2
VCC

7. MICROCOMPUTER

A) BLOCK DIAGRAM


RESET
INT
XTAL
EXTAL
VPP
TIMER
PRESCALER
TIMER/ COUNTER
TIMER CONTROL
OSCILLATOR
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PORT A REG
DATA DIR REG
ACCUMULATOR A 8
INDEX REGISTER X 8
CONDITION CODE REGISTER CC 5
STACK POINTER SP 5
PROGRAM COUNTER HIGH PCH 3
PROGRAM COUNTER LOW PCL 8
CPU CONTROL
ALU
1804X8 EPROM
115X8 BOOTSTRAP ROM
DATA DIR REG
PORT B REG
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
DATA DIR REG
PORT C REG
PC0
PC1
PC2
PC3
112 X 8 RAM

B) PIN ASSIGNMENT


Vss
INT
Vcc
EXTAL
XTAL
VPP
TIMER
PC0
PC1
PC2
PC3
PB0
PB1
PB2
RESET
PA 7
PA 6
PA 5
PA 4
PA 3
PA 2
PA 1
PA 0
PB 7
PB 6
PB 5
PB 4
PB 3

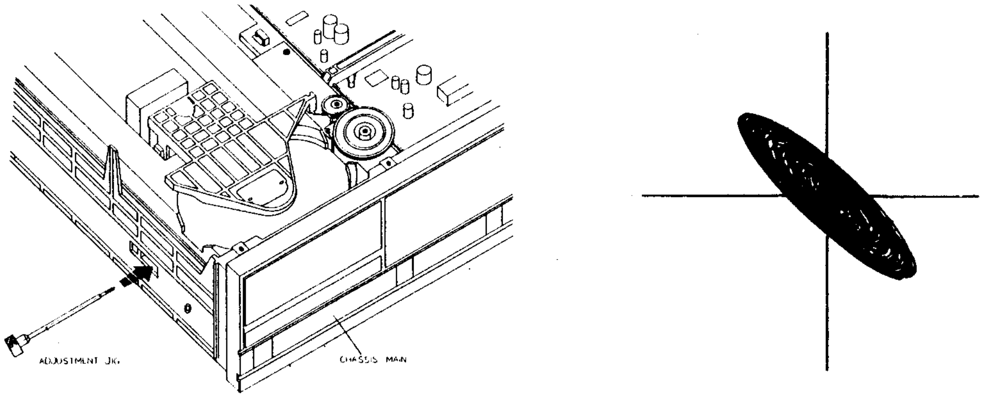
6) Observe the resurge waveform of the waveform indicated on the oscilloscope and insert the adjustment jig into the diffraction grid and set phase difference at 180°, so that indication Ac voltmeter is maximum. (see figure 1).

7) Even if the phase difference is 180° in the above step, the E and F subbeams may be mistakenly on the different track. Be sure that the E and F subbeam is on the same track.

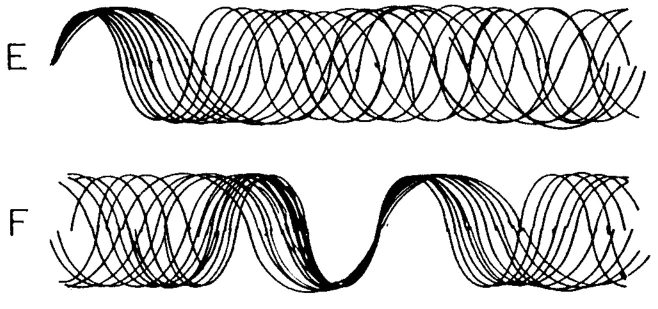
8) Remove the short between the pin No. 4 of IC 2109 and GND.

9) Observe the waveform of the signal between test pin 2 and the pin No. 9 (E) of IC 2101 using dualtrace oscilloscope (Monitored in ALT mode). The beam E and beam F are in the same track if triggered of waveform F is approximately 36.7 μs behind the point (position where waveform hollows out) where the waveform E is triggered (see figure 2).

10) When the beams are not on the same track return to step 3), and rotate the adjustment jig at the 180° point. Repeat steps 3) to 9) until confirmation of this is possible.


ADJUSTMENT JIG
CHASSIS MAIN

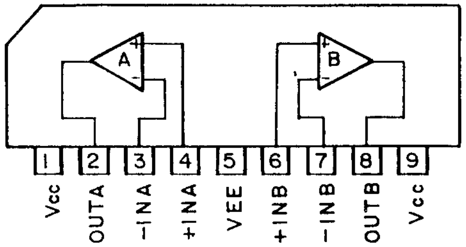
(FIGURE 1)

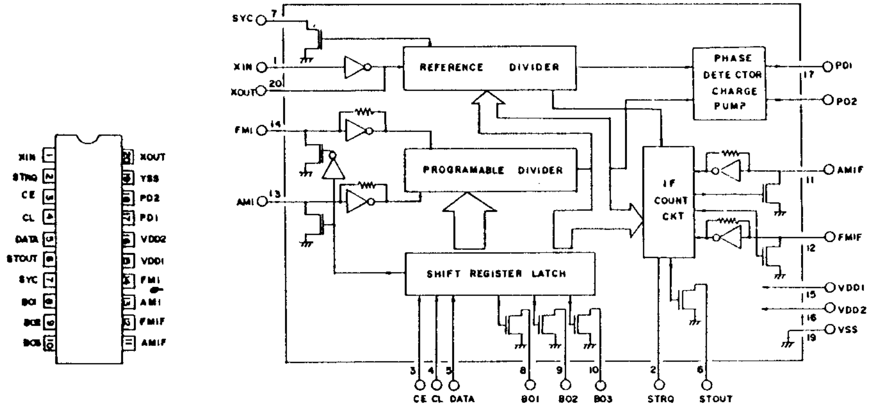


(FIGURE 2)

8. OPERATIONAL AMPLIFIER COMPARATOR

NJM 2068S
TA 75393S

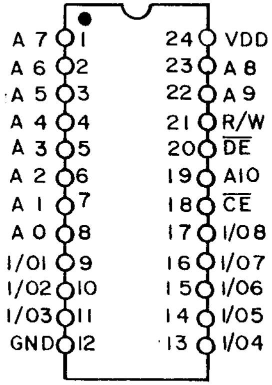

A
B
1 Vcc
2 OUTA
3 −INA
4 +INA
5 VEE
6 +INB
7 −INB
8 OUTB
9 Vcc

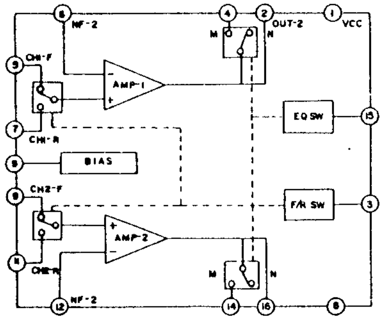

XIN 1
STRQ 2
CE 3
CL 4
DATA 5
STOUT 6
SYC 7
BO1 8
BO2 9
BO3 10
XOUT 20
VSS 19
PD2 18
PD1 17
VDD2 16
VDD1 15
FMI 14
AMI 13
FMIF 12
AMIF 11
REFERENCE DIVIDER
PROGRAMABLE DIVIDER
SHIFT REGISTER LATCH
PHASE DETECTOR CHARGE PUMP
IF COUNT CKT
CE CL DATA
BO1 BO2 BO3
STRQ
STOUT

LM − 7000

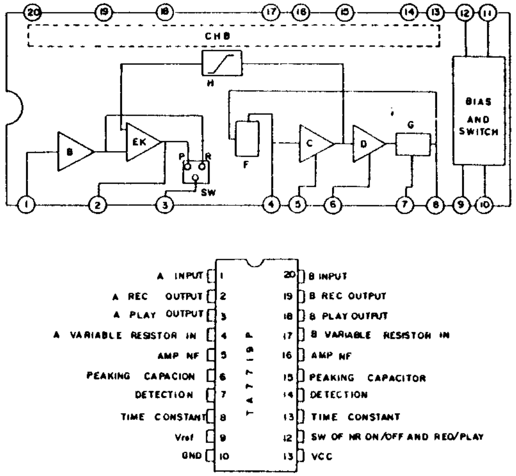
9. 2K S-RAM

TC-5517


A 7 1
A 6 2
A 5 3
A 4 4
A 3 5
A 2 6
A 1 7
A 0 8
I/O1 9
I/O2 10
I/O3 11
GND 12
24 VDD
23 A 8
22 A 9
21 R/W
20 $\overline{DE}$
19 A10
18 $\overline{CE}$
17 I/O8
16 I/O7
15 I/O6
14 I/O5
13 I/O4

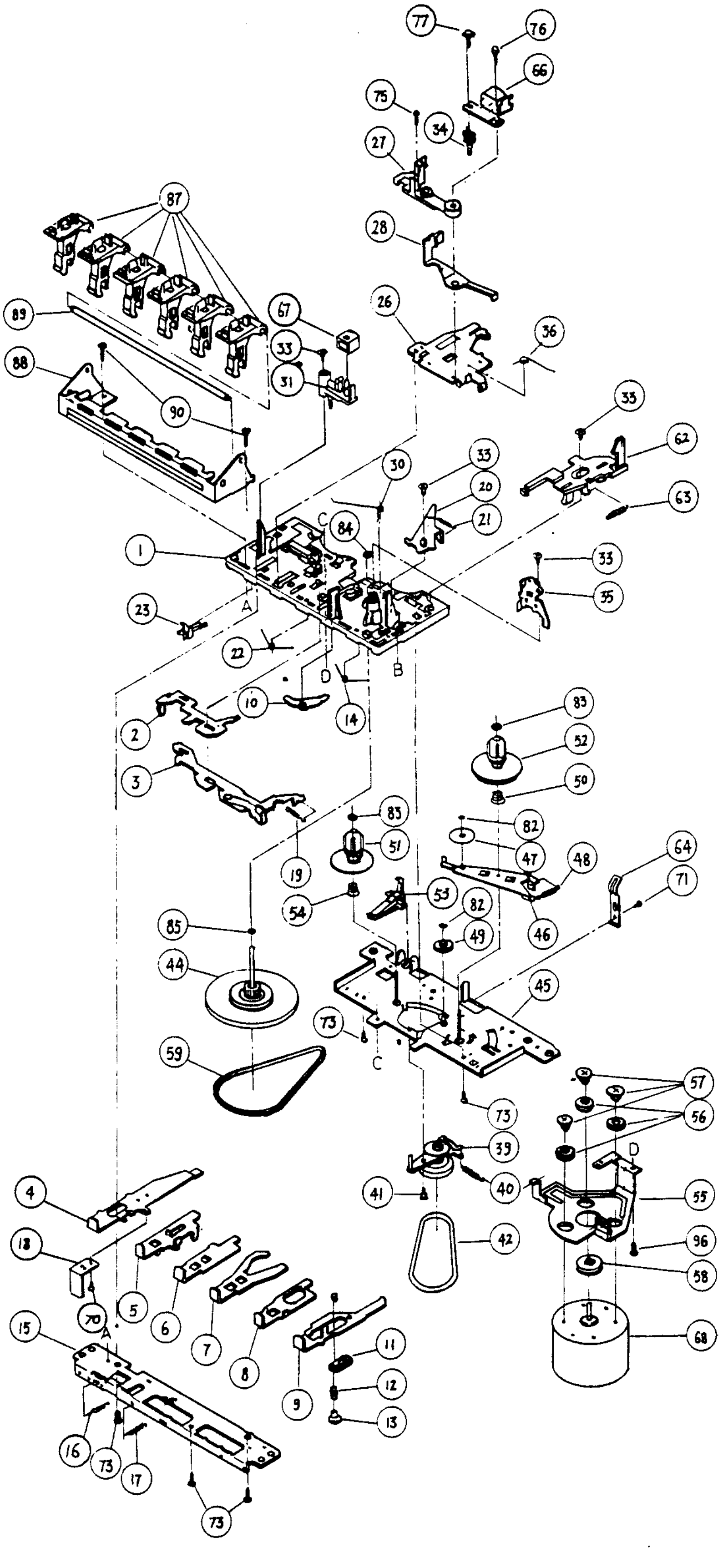

NF-2
OUT-2
VCC
CH1-F
CH1-R
BIAS
CH2-F
CH2-R
AMP-1
AMP-2
EQ SW
F/R SW
M
N

TA 7784P


CH B
H
B
EK
P
R
SW
F
C
D
G
BIAS AND SWITCH
A INPUT 1
A REC OUTPUT 2
A PLAY OUTPUT 3
A VARIABLE RESISTOR IN 4
AMP NF 5
PEAKING CAPACION 6
DETECTION 7
TIME CONSTANT 8
Vref 9
GND 10
20 B INPUT
19 B REC OUTPUT
18 B PLAY OUTPUT
17 B VARIABLE RESISTOR IN
16 AMP NF
15 PEAKING CAPACITOR
14 DETECTION
13 TIME CONSTANT
12 SW OF NR ON/OFF AND REC/PLAY
13 VCC
TA7719P

TA 7719P

10. DECK MECHANICAL EXPLODED VIEW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76
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89
67
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36
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88
31
90
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62
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33
20
C
84
63
21
1
33
A
35
23
22
D
B
10
14
83
2
52
50
3
83
82
51
47
48
64
19
71
54
53
82
85
49
46
44
45
73
C
59
57
73
56
39
D
4
41
40
55
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A
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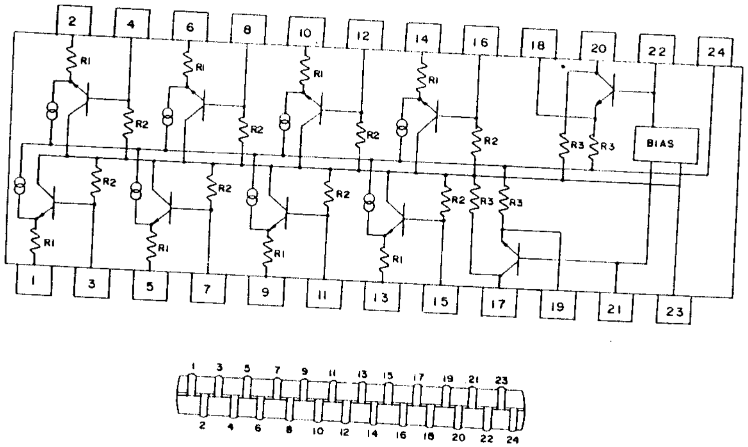
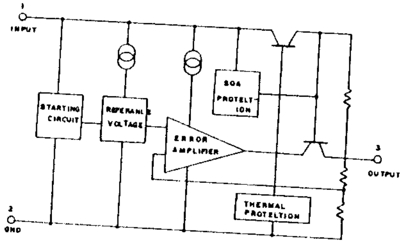
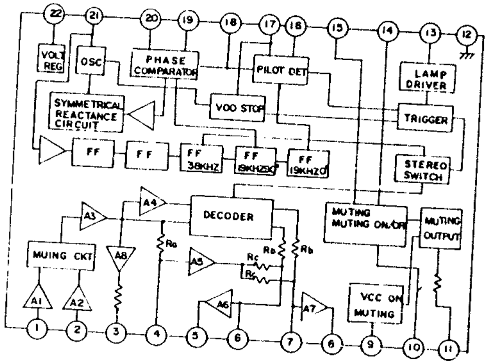
73
17
73


2
4
6
8
10
12
14
16
18
20
22
24
R1
R2
R3
BIAS
1
3
5
7
9
11
13
15
17
19
21
23

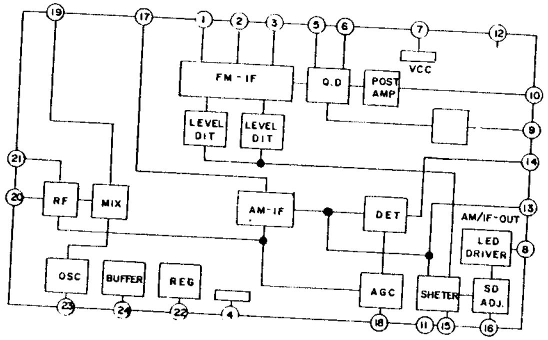
BA 3822


1
INPUT
STARTING CIRCUIT
REFERANCE VOLTAGE
ERROR AMPLIFIER
SOA PROTECTION
THERMAL PROTECTION
3
OUTPUT
2
GND

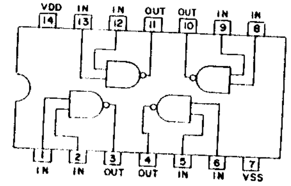
78M12


22
21
20
19
18
17
16
15
14
13
12
VOLT REG
OSC
PHASE COMPARATOR
PILOT DET
LAMP DRIVER
SYMMETRICAL REACTANCE CIRCUIT
VCO STOP
TRIGGER
FF
FF
FF 38KHZ
FF 19KHZ90°
FF 19KHZ0
STEREO SWITCH
A3
A4
DECODER
MUTING MUTING ON/OFF
MUTING OUTPUT
MUING CKT
A8
Ra
A5
Rc
Rb
A6
A7
VCC ON MUTING
A1
A2
1
2
3
4
5
6
7
8
9
10
11

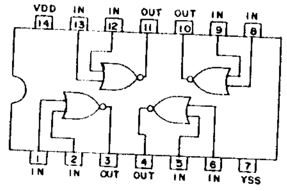
LA 3400


19
17
1
2
3
5
6
7
12
VCC
FM - IF
Q.D
POST AMP
LEVEL DIT
LEVEL DIT
10
9
14
21
20
RF
MIX
AM - IF
DET
13
AM/IF-OUT
LED DRIVER
8
OSC
BUFFER
REG
AGC
SHETER
SD ADJ.
23
24
22
4
18
11
15
16

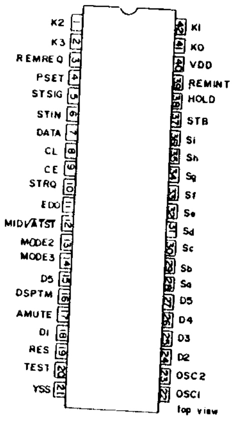
LA 1267


VDD
IN
IN
OUT
OUT
IN
IN
14
13
12
11
10
9
8
1
2
3
4
5
6
7
IN
IN
OUT
OUT
IN
IN
VSS

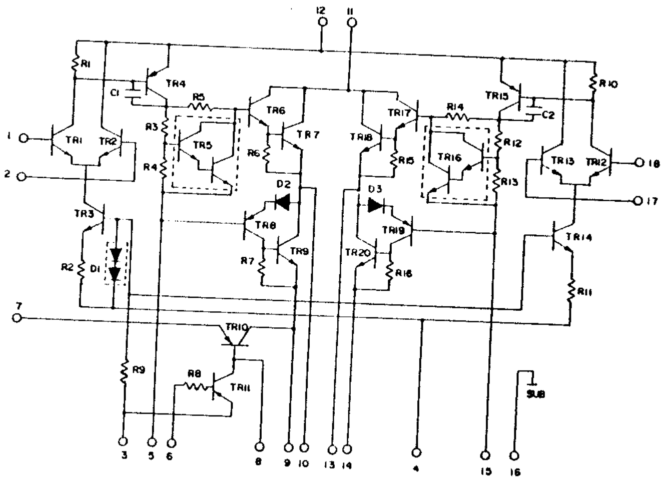
LC 4011


VDD
IN
IN
OUT
OUT
IN
IN
14
13
12
11
10
9
8
1
2
3
4
5
6
7
IN
IN
OUT
OUT
IN
IN
VSS

LC 4001


K2 1
K3 2
REMREQ 3
PSET 4
STSIG 5
STIN 6
DATA 7
CL 8
CE 9
STRQ 10
EDO 11
MIDV/ATST 12
MODE2 13
MODE3 14
D5 15
DSPTM 16
AMUTE 17
DI 18
RES 19
TEST 20
YSS 21
42 K1
41 KO
40 VDD
39 REMINT
38 HOLD
37 STB
36 Si
35 Sh
34 Sg
33 Sf
32 Se
31 Sd
30 Sc
29 Sb
28 Sa
27 D5
26 D4
25 D3
24 D2
23 OSC2
22 OSC1
top view

LC 7030


12
11
R1
C1
TR4
R5
TR6
TR17
R14
TR15
C2
R10
1
TR1
TR2
R3
TR5
R6
TR7
TR18
R15
TR16
R12
TR13
TR12
18
2
R4
R13
17
D2
D3
TR3
TR8
TR19
TR14
R2
D1
R7
TR9
TR20
R16
R11
7
TR10
R9
R8
TR11
SUB
3
5
6
8
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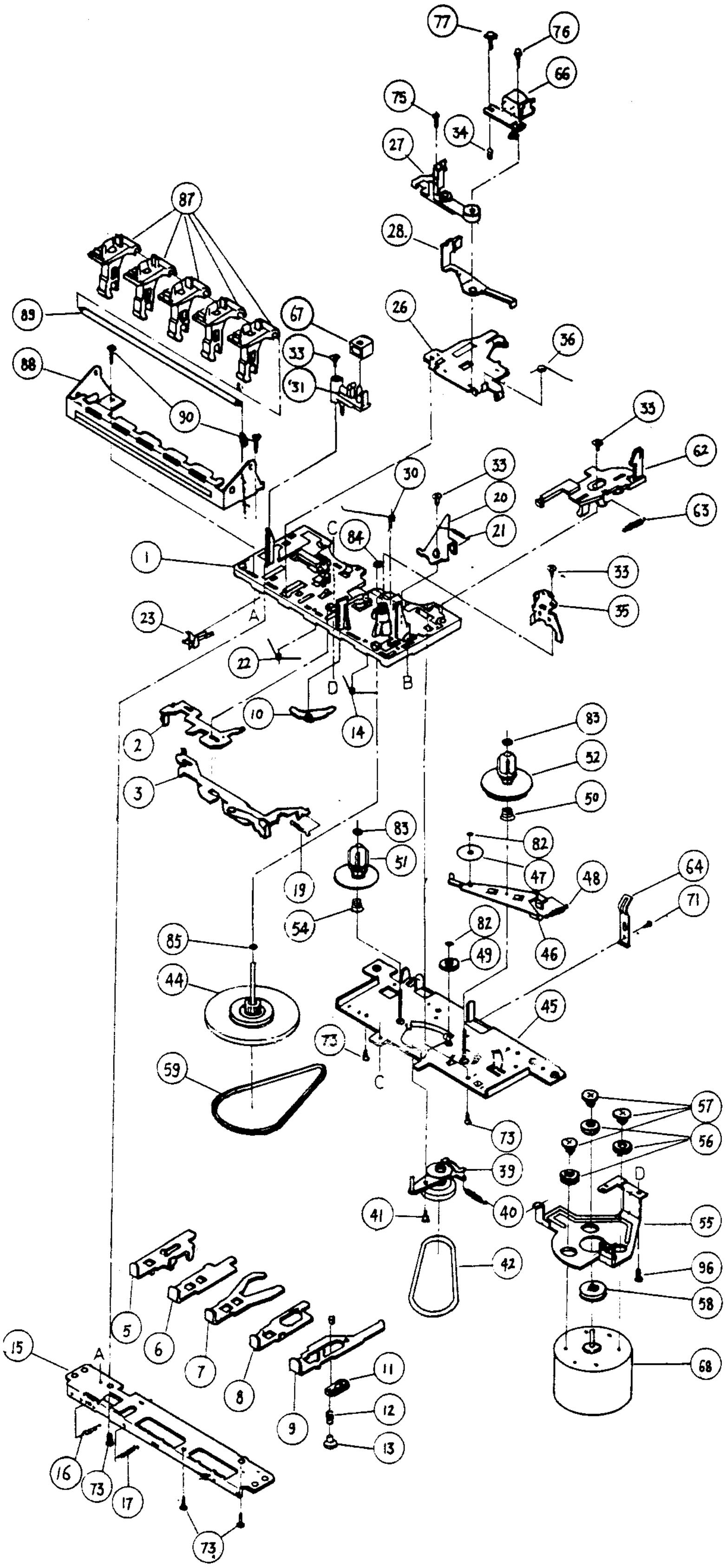
13
14
4
15
16

STK 4121 - II


C
A
D
B
C
D
A

ADJUSTMENT

1. Pitch control range adjustment.
   1) Set pitch control knob to its mechanical center.
   2) Select required speed.
   3) Adjust semifix resistor (33 RPM) with small minus driver until speed becomes rating.
   4) Repeat for second speed. (45 RPM)
2. Auto return-range adjustment.
   1) If tone arm returns to early or does not return at all, open the bottom cover and adjust the auto-return point as follows.
   2) Lock tone arm to the arm rest and turn adjust screw (Fig. 3).
      A: Clockwise ⇛ Autoreturn point will be later.
      B: Counterclockwise ⇛ Autoreturn point will be earlier.

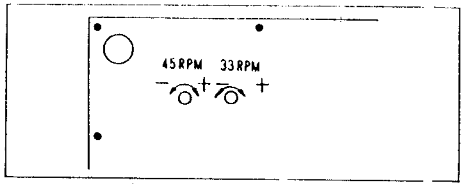


Fig. 2

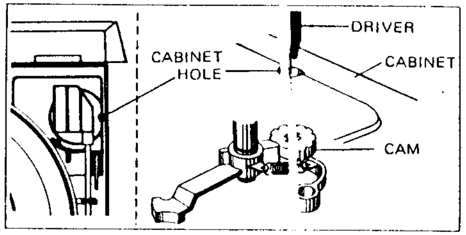


Fig. 3

STYLUS REPLACEMENT

The life expectance of a diamond stylus is approximately 300-500 hours, although it depends greatly on the cleanliness of the record and stylus. With this as a guide, it should be replaced before it becomes worn, or it will damage your records. For an inspection consult your dealer because it is not possible to check a stylus tip by eye. If your perceive distortion when playing records though the stylus is clean, it may be possible that the stylus tip is damaged. Before taking off the cartridge put on the stylus guard.

The stylus tip is replaced by grasping the stylus holder and pulling it away from the body of the cartridge. The new stylus tip is then inserted by pushing it into the receptacle. (Fig. 4)

Note: Upon replacement of the stylus be sure that the AC power is switched off or that the volume of the amplifier is turned to minimum or 0.

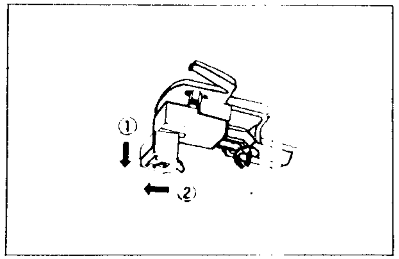


Fig. 4

CONNECTION

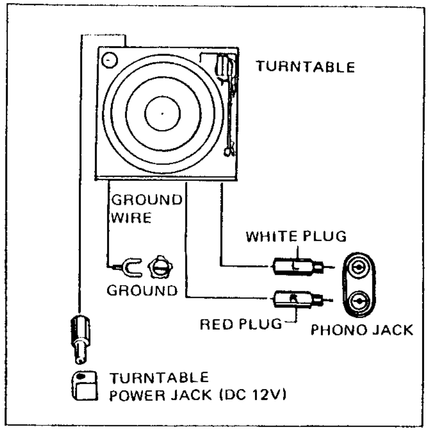


Fig. 5

1. Connect the audio cables to the PHONO inputs of you amplifier. Use the red plug for the right channel (R) and the white plug for the left channel (L). Connect the ground wire to the GND terminal on your amplifier.
   Make certain that the ground wire is securely connected to the ground terminal. A loose connection will produce hum in the speaker.
2. Connect the power jack to the socket of set rear.

Turntable phono terminal	Amplifier jack
White plug (L: Left)	Phono L channel
Red plug (R: Right)	Phono R channel
Ground terminal wire	GND terminal

CARTRIDGE REPLACEMENT

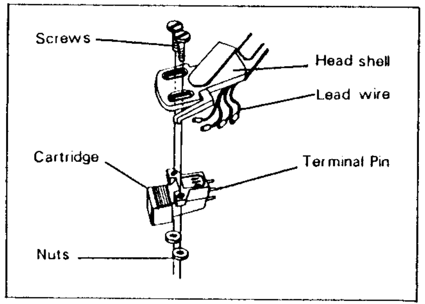


Fig. 6

Follow cartridge manufacturer's instructions for replacement of cartridge when necessary.
Replacement cartridge: AT-3601 (AUDIO TECHNICA)

1. The terminals on the headshell are aligned as shown. Check the location and polarity of each of the cartridge terminal pins and the connect the lead wires, taking care not to get the polarities mixed up.
2. Attach the cartridge to the underside of the headshell using the screws, nuts.
3. Adjust the position of the cartridge tip so that the stylus and the connector section of the headshell are 36 mm apart and tighten up the screws. Make sure that the cartridge does not tilt to one side when you attach it.

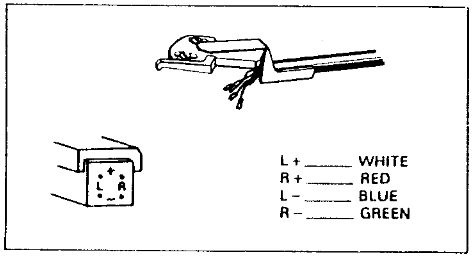


Fig. 7

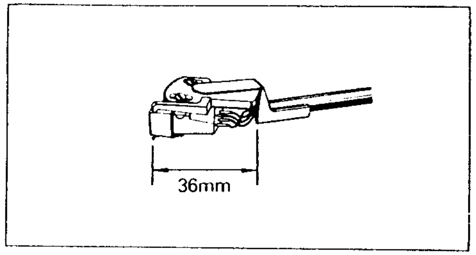
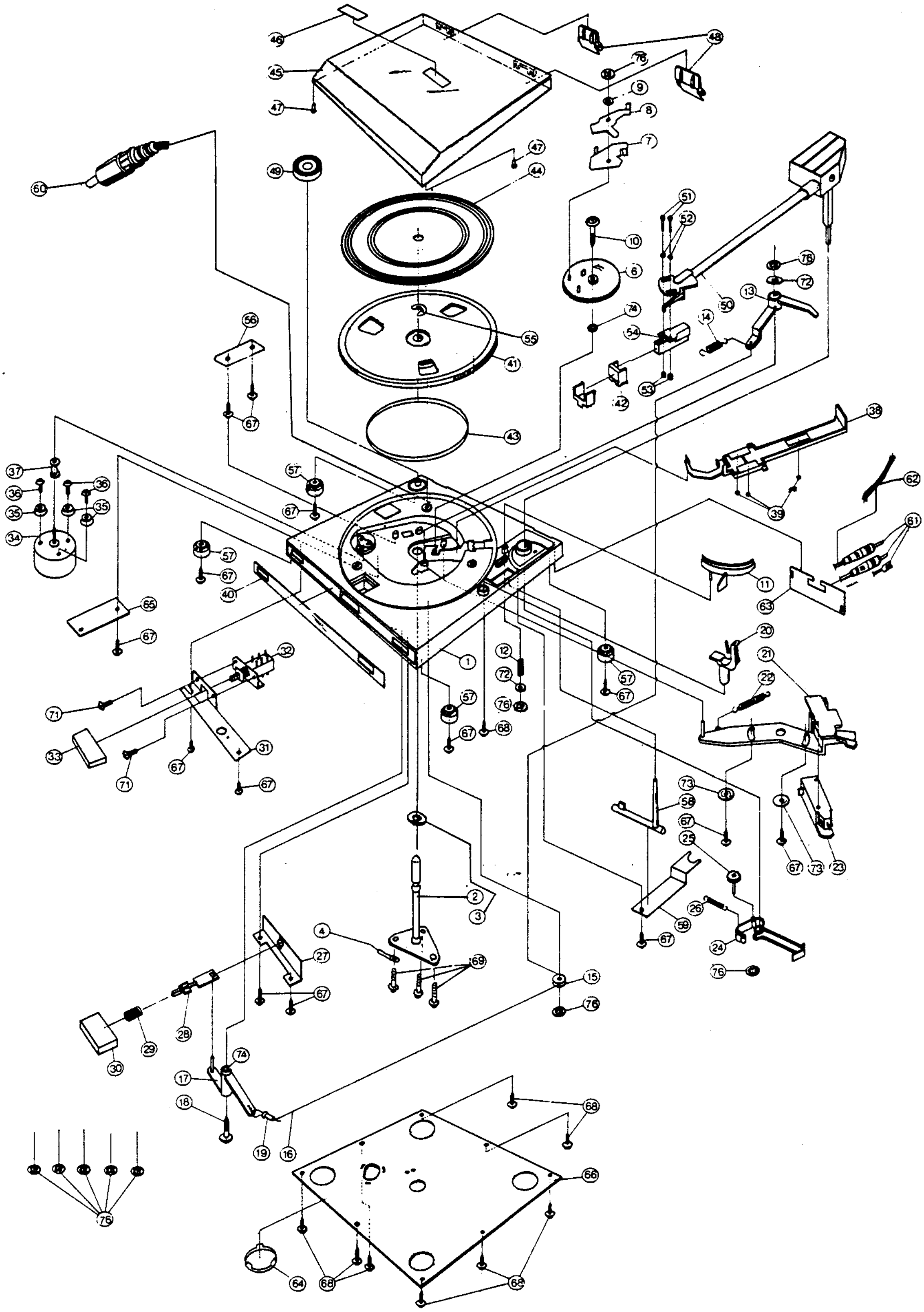


Fig. 8

EXPLODED VIEW


46
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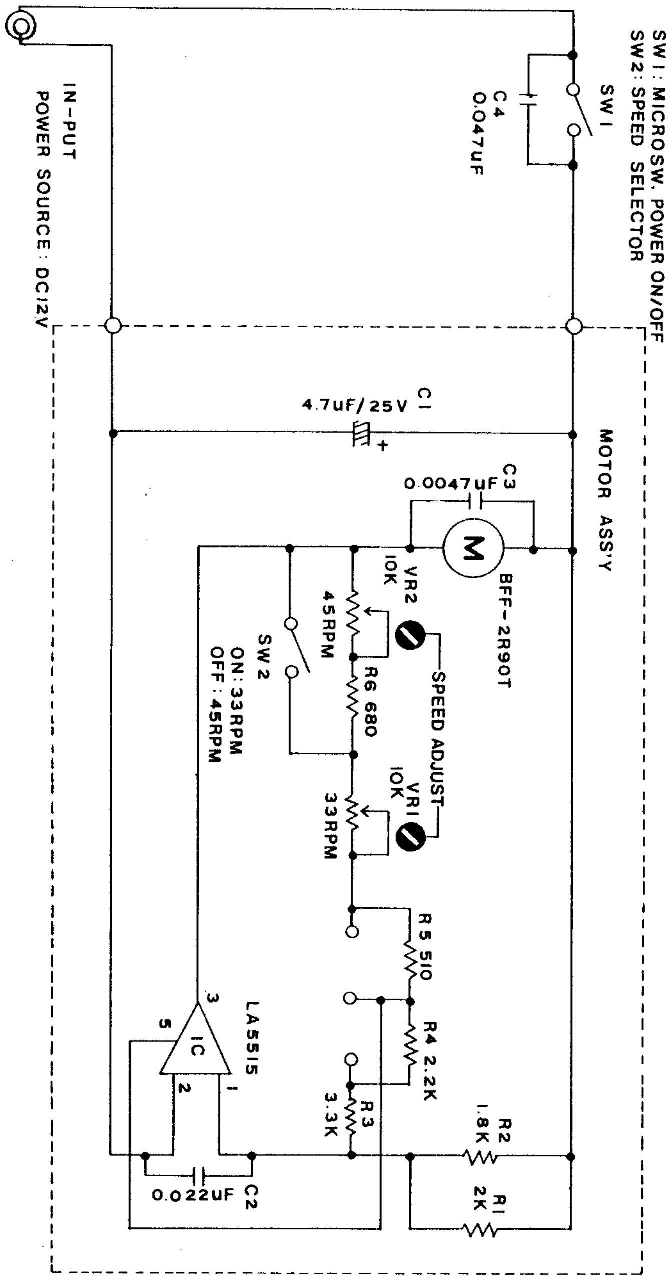


TROUBLESHOOTING GUIDE

NO.	FAULT	CAUSE	CORRECTION
1	Turntable Speed.	1) No voltage to turntable.	Check power supply outlet. Check power cord and power fuse in electronic controlled models
	a) Will not start: No, 1,2,3,4,6 7 and 8.	2) Motor bearings binding or frozen.	Check assembly for mechanical damage, repair lubricate or replace as indicated.
	b) Turns slow: No. 2,3,5,6 and 9.	3) Fuse open in electronic models. 4) Drive belt defective or missing.	Replace fuse, reapir electronics as required. Determine cause of defect and correct. Replace belt.
		5) Oil on belt.	Determine cause of oil, clean or replace belt.
	c) Turns fast: No. 6 and 9.	6) Circuit defect in electronic control models.	Troubleshoot and repair, refer to circuit diagram.
		7) Defective switch.	Replace switch.
	d) Speed changes without apparent cause: No. 2,4,5,6 and 10.	8) Wrong supply voltage.	Check input supply rating on turntable. Correct supply voltage condition.
		9) Speed control was adjusted improperly.	Set turntable into operation. Adjust VR 1 (33 1/3) and VR2 (45).
		10) Two or more records on turntable, one record warped.	Remove Warped record.
2.	Pick-up Height.	1) Worn or damaged cams or levers.	Inspect worn or damaged parts. Replace and lubricate as required.
	a) Arm does not lift of record on return cycle:	2) Bent or damaged components.	Repair or replace.
		3) Improper lift adjustment.	Inspect damaged or missing parts. Repair, replace and relubricate as necessary.
	b) Arm lifter (cueing control) does not lift arm: No. 1,2, and 3. c) Insufficient or excessive lift: No. 1, 2, and 3. Pickup Lowering Position.	4) Arm lowering mechanism damaged or binding.	Inspect to determine cause of damage, replace parts as required. Relubricate.
3	Abnormal Sound. a) Excessive noise: No. 1,2, and 3.	1) Ground lead is not connected.	Connect properly to the amplifier's ground terminal.
		2) Dust or dirt has collected on the stylus tip.	Clean the stylus tip with a soft brush.
	b) Sound is distorted. No. 3,4 and 5.	3) Dust or dirt has collected on the record.	Clean the record with a good quality cleaner.
		4) Stylus is worn.	Replace with new stylus.
	c) Intermittent sound: No. 3,4,5 and 6.	5) Amplifiers tone controls set too high.	Set tone controls to lower position.
		6) Record is scratched or warped.	Replace record.
	d) No sound: No. 7.	7) Phono cables are not connected properly.	Connect cables securely to the PHONO input jacks on the amplifier (See Instruction Manual Page. 4).

ZEILE	POSITION	SYM	BEZEICHNUNG	ET-NUMMER
1				
2			HALTEWINKEL FUER PLATTENSPIELER	734 914 5
3			FM-WURFANTENNE 75 OHM-ANSCHLUSS	965 604 2
4			LAUTSPRECHERBOX KPL.	734 917 8
5				
6			**GEHAEUSE UND BEDIENTEILE :**	
7				
8	1		FRONTBLENDE	734 868 3
9	2		ABDECKSCHEIBE,TUNER	734 873 3
10	3		FILTERSCHEIBE,FUNKTION	734 875 8
11	4		ABDECKSCHEIBE,FUNKTION	734 874 1
12	5		CASSETTENFACHABDECKUNG "B"	734 872 5
13	6		CASSETTENFACHABDECKUNG "A"	734 871 7
14	7		CASSETTENFACH	734 869 1
15	8		ABDECKSCHEIBE,CD-PLAYER	734 877 4
16	9		ABDECKSCHEIBE,ZAEHLWERK	734 876 6
17	10		ZIERLEISTE,UNIVERSUM,TUNER	734 881 6
18	11		ZIERLEISTE,UNIVERSUM,VERSTAERKER	734 882 4
19	12		ZIERLEISTE,CASS.-FACH "A"	734 884 0
20	13		ZIERLEISTE,CASS.-FACH "B"	734 885 7
21	14		ZIERLEISTE,RECHTS,TB	734 886 5
22	15		ZIERLEISTE,UNIVERSUM,CD-PLAYER	734 883 2
23	16		KNOPF,NETZSCHALTER	734 890 7
24	21		KNOPF,SCHIEBEREGLER	734 892 3
25	22		KNOPF,AM-FM-PRESET	734 909 5
26	23		KNOPF,TUNING	734 891 5
27	24		KNOPF,PHONO	734 893 1
28	25		KNOPF,SEARCH-SUCHLAUF	734 894 9
29	26		KNOPF,FM	734 895 6
30	27		KNOPF,LW	734 897 2
31	28		KNOPF,MW	734 896 4
32	29		ABDECKUNG,KH-BUCHSE	734 888 1
33	30		CASSETTENLAUFWERK,WIEDERGABE	733 171 3
34	31		CASSETTENLAUFWERK A/W	734 930 1
35	32		KNOPF,CASSETTE	734 899 8
36	33		KNOPF,WIEDERGABE,TAPE "A"	734 898 0
37	35		FEDER	734 931 9
38	36		FEDER	734 932 7
39	37		MIKRO-SCHALTER	740 006 2
40	41		FEDER,CASS.-AUSWURF	734 925 1
41	42		ACHSE FUER KNOEPFE	734 923 6
42	46		FEDER,A/W-HEBEL	734 919 4
43	49		DAEMPFER-EINHEIT	734 926 9
44	51		ZAEHLWERK	733 170 5
45	55		RIEMEN,ZAEHLWERK	734 922 8
46	59		KNOPF,TAPE-SELECTOR-A-B	734 902 0
47	61		KNOPF,DOLBY	734 900 4
48	62		BLINDKNOPF	734 889 9
49	63		KNOPF,HIGH SPEED	734 901 2
50	64		FILTERSCHEIBE,DISPLAY-CD	734 880 8
51	65		KNOPF,PLAY-PAUSE	734 903 8
52	66		KNOPF,CD-STOP	734 905 3
53	67		KNOPF,REW	734 906 1
54	68		KNOPF,FWD	734 907 9
55	69		FEDER FUER KNOPF-OPEN	734 924 4
56	70		KNOPF,OPEN-CLOSE	734 908 7
57	71		KNOPF,MIC-MIX	734 904 6
58	72		FUSS	734 929 3
59	73		UNTERTEIL MIT RUECKWAND	734 912 9
60	86		HALTER FUER FERRITANTENNE	734 927 7
61	87		FERRITANTENNE	734 928 5
62	105		SCHALTER,BEAT-CUT	734 916 0
63	107		NETZTRAFO	734 913 7
64	115		BLENDE FUER CD-SCHLITTEN	734 870 9
65	116		ABDECKUNG,SCHLITTEN	734 878 2
66	127		CINCHBUCHSE	734 921 0
67	129		LAUTSPRECHERBUCHSENLEISTE	734 920 2
68	131		ANTENNENANSCHLUSSLEISTE	734 918 6
69	137		GEHAEUSE-OBERTEIL	734 911 1
70	138		EINLAGE,GEHAEUSE-OBERTEIL	734 910 3
71	142		FILTERSCHEIBE,DISPLAY-TUNER	734 879 0
72			FREMDSPANNUNGS-BUCHSE	734 915 2
73				
74			**DISC-MECHANIK :**	
75				
76	1		SCHLITTEN	734 933 5
77	2		GUMMISTOPPEN	734 937 6
78	3		WIPPE,LINKS	734 934 3
79	5		FEDER FUER WIPPE	734 936 8
80	6		WIPPE,RECHTS	734 935 0
81	8		ABDECKUNG	734 940 0
82	9		KUGEL 4 MM	985 533 9
83	10		TELLER,OBEN	734 941 8
84	11		SCHEIBE	734 942 6

ZEILE	POSITION	SYM	BEZEICHNUNG	ET-NUMMER
85	12		PLATTENHALTER	734 939 2
86	14		TELLER,UNTEN	734 965 7
87	15		PULLY	734 959 0
88	16		RIEMEN	734 960 8
89	19		STOPPEN	734 963 2
90	20		ZAHNRAD	734 962 4
91	21		KURVENRAD	734 957 4
92	22		HEBEL	734 961 6
93	23		FEDER	734 943 4
94	24		HEBEL	734 964 0
95	25		MIKRO-SCHALTER	740 025 2
96	26		MIKRO-SCHALTER	740 024 5
97	27		ZAHNRAD	734 955 8
98	28		MOTOR RF-510T-12620	740 020 3
99	29		ZAHNRAD	734 956 6
100	30		GEWINDEBOLZEN	734 958 2
101	33		LASER-EINHEIT MLP-7	740 023 7
102	35		PLATTE	734 966 5
103	41		MOTOR NBS4R	740 021 1
104	42		ACHSE FUER SCHLITTEN	734 945 9
105	43		LASERSCHLITTEN	734 944 2
106	44		ZAHNRAD	734 948 3
107	45		FEDER	734 951 7
108	46		ZAHNRAD	734 947 5
109	47		BOLZEN	734 954 1
110	49		ZAHNRAD	734 949 1
111	50		GEWINDEBOLZEN	734 952 5
112	51		FEDER	734 950 9
113	52		ZAHNRAD	734 946 7
114	53		GEWINDEBOLZEN	734 953 3
115				
116			**ELEKTRISCHETEILE RDF U.TB :**	
117				
118			NETZTRAFO	734 913 7
119			FREMDSPANNUNGS-BUCHSE	734 915 2
120			UKW-TEIL	734 887 3
121	C901,902		ELKO 3300 M/50V	740 000 5
122	CF1,2		FM-KERAMIKFILTER	986 820 9
123	CF101		AM-KERAMIK-FILTER AHCM2-450 BL	734 979 8
124	CF102		AM-KERAMIK-FILTER BFU 450C-4N	734 980 6
125	CF301		KERAMIK-RESONATOR CSB 456 F10	734 981 4
126	D101		CAP.-DIODE KV 1236 Z1	733 388 3
127	D201,302		LED KLY 114 E	734 976 4
128	D202,301		DIODE 1 N 4148	175 540 4
129	D303,304		DIODE 1 N 4148	175 540 4
130	D601-603		DIODE 1 N 4148	175 540 4
131	D801-803		LED MU02-5201	734 978 0
132	D804		LED MU02-3201	734 977 2
133	D805-812		DIODE 1 N 4148	175 540 4
134	D901		BRUECKENGLEICHRICHTER 2KBP02	732 709 1
135	D904,905		GLEICHRICHTER SRIK-2	176 045 3
136	D906		Z-DIODE RD 8,2 EB2	987 057 7
137	D907		ZENERDIODE RD 24 FB 3	954 413 1
138	D908		Z-DIODE RD 5,6 EB1	965 944 2
139	D909,910		ZENERDIODE UZ 12 B	951 968 7
140	D912-914		DIODE 1 N 4148	175 540 4
141	D915		GLEICHRICHTER SRIK-2	176 045 3
142	D1001-1003		DIODE 1 N 4148	175 540 4
143	D1006		Z-DIODE RD 5,6 EB1	965 944 2
144	D1007-1024		DIODE 1 N 4148	175 540 4
145	D1025		LED KLY 114 E	734 976 4
146	D1401,1622		DIODE 1 N 4148	175 540 4
147	D1601		GLEICHRICHTER SRIK-2	176 045 3
148	D1602-1604		DIODE 1 N 4148	175 540 4
149	D1605,1606		LED KLY 114 E	734 976 4
150	D1607,1608		DIODE 1 K 188	948 734 9
151	FL1001		DISPLAY FIP7C8D	734 281 9
152	L1601,1651		LOW-PASS-FILTER	734 991 3
153	LF301,351		LOW-PASS-FILTER	734 990 5
154	H901		KOPFHOERERBUCHSE	966 594 4
155	IC51		IC LA 3160	986 435 6
156	IC101		IC LA 1267	734 938 4
157	IC301		IC LA 3400	733 828 8
158	IC401,501		IC NJM 4558 D	950 628 8
159	IC402		IC BA 3822 L	734 967 3
160	IC601		IC TA 7784 P	734 070 6
161	IC701		IC LB 1213	734 974 9
162	IC801		IC LC 7817	734 968 1
163	IC802,804		IC LC 4001 B	730 335 7
164	IC803		IC LC 4011	734 969 9
165	IC901,902		IC NJM 78 M 12	985 474 6
166	IC1001		IC LC 7030	734 971 5
167	IC1002		IC LM 7000	734 970 7
168	IC1400		IC STK 4121 II	734 972 3
169	IC1600		IC TA 7719 P	734 973 1
170	L701,751		DROSSEL	734 995 4
171	L702,752		DROSSEL	734 996 2

ZEILE	POSITION	SYM	BEZEICHNUNG	ET-NUMMER
172	L1601		DROSSEL	734 993 9
173	LF301,351		LOW-PASS-FILTER	734 990 5
174	LF1601,51		LOW-PASS-FILTER	734 991 3
175	Q1		TRANSISTOR 2 SC 838	175 507 3
176	Q101,102		TRANSISTOR 2 SC 2240 BL	950 910 0
177	Q103,104		TRANSISTOR 2 SC 945	175 739 2
178	Q201,603		TRANSISTOR 2 SA 733 P	275 032 1
179	Q601,602		TRANSISTOR 2 SC 945	175 739 2
180	Q651,901		TRANSISTOR 2 SC 945	175 739 2
181	Q701,751		TRANSISTOR 2 SC 1222 L	986 868 8
182	Q801		TRANSISTOR 2 SA 708 Y	986 867 0
183	Q802,803		TRANSISTOR 2 SC 945	175 739 2
184	Q804,805		TRANSISTOR 2 SA 733 P	275 032 1
185	Q806-809		TRANSISTOR 2 SC 945	175 739 2
186	Q810		TRANSISTOR 2 SA 733 P	275 032 1
187	Q811,812		TRANSISTOR 2 SC 945	175 739 2
188	Q1001-1003		TRANSISTOR 2 SA 733 P	275 032 1
189	Q1004,1005		TRANSISTOR 2 SK 583	734 975 6
190	Q1006-1010		TRANSISTOR 2 SA 733 P	275 032 1
191	Q1011-1013		TRANSISTOR 2 SC 945	175 739 2
192	Q1401,1451		TRANSISTOR 2 SC 945	175 739 2
193	Q1601,1606		TRANSISTOR 2 SC 1222 L	986 868 8
194	Q1602,1605		TRANSISTOR 2 SC 945	175 739 2
195	Q1607,1611		TRANSISTOR 2 SC 945	175 739 2
196	Q1612		TRANSISTOR 2 SA 708 Y	986 867 0
197	Q1613		TRANSISTOR KSC 2331 Y	740 016 1
198	Q1651		TRANSISTOR 2 SC 1222 L	986 868 8
199	Q1652-1655		TRANSISTOR 2 SC 945	175 739 2
200	SW-TUNER		TAKT-SCHALTER	740 001 3
201	SW701		A/W-SCHIEBESCHALTER	740 002 1
202	SW901		NETZSCHALTER	740 003 9
203	SW1601-4		SCHALTER	740 005 4
204	T101		MW-OSZILLATORSPULE	734 986 3
205	T102		LW-OSZILLATORSPULE	734 987 1
206	T103		MW-ANTENNEN-FILTER	734 984 8
207	T104		LW-ANTENNEN-FILTER	734 985 5
208	T201		FM-ZF-FILTER	734 983 0
209	T202		AM-ZF-FILTER	734 988 9
210	T301		LOW-PASS-FILTER	734 989 7
211	T701,751		DROSSEL	734 992 1
212	T1601		LOESCH-OSZILLATORSPULE	734 994 7
213	VR401-405		SCHIEBEREGLER 2X50K	734 997 0
214	VR407,457		SCHIEBEREGLER 2X250K	734 998 8
215	VR408		SCHIEBEREGLER 250K	734 999 6
216	VR-MIC.		DREHPOTI 2X50K	740 004 7
217	X1001		QUARZ 7,2 MHZ	733 233 1
218	X1002		KERAMIK-RESONATOR CSB 400P	734 982 2
219				
220			**ELEKTRISCHETEILE CD-PLAYER :**	
221				
222	D2201		CAP.-DIODE SVC 211	730 467 8
223	D2601		GLEICHRICHTER SRIK-2	176 045 3
224	D2602,2603		ZENERDIODE UZ 12 B	951 968 7
225	D2604,2605		ZENERDIODE UZ 6,8 B	922 823 0
226	D2701-2706		DIODE 1 N 4148	175 540 4
227	D2709		LED KLY 114 E	734 976 4
228	D2710,2711		LED DL-1L GN	740 049 2
229	F2701		DISPLAY KLG-321	740 022 9
230	IC101		IC CX 20109	732 209 2
231	IC102		IC YM 3805	731 394 3
232	IC103		IC TC 5517 BF-20	740 007 0
233	IC104		IC YM 3015	740 008 8
234	IC105		IC MC 8705 P4	740 009 6
235	IC106		IC NJM 2068 SD	740 010 4
236	IC107		IC LM 7805 CT	740 011 2
237	IC108,109		IC NJM 2068 SD	740 010 4
238	IC110,112		IC TA 7256 P	740 012 0
239	IC111		TA 75393 S	740 013 8
240	IC113,114		IC NJM 2068 SD	740 010 4
241	L2101		FILTER VF1-7D	740 017 9
242	L2102,2103		FILTER FB-10B	740 018 7
243	L2104		OSZILLATORSPULE	740 019 5
244	M2801,2803		MOTOR RF-510T-12620	740 020 3
245	M2802		MOTOR NBS4R	740 021 1
246	PU1		LASER-EINHEIT MLP-7	740 023 7
247	Q2201-2303		TRANSISTOR 2 SC 945	175 739 2
248	Q2304,2402		TRANSISTOR 2 SA 733 P	275 032 1
249	Q2305-2401		TRANSISTOR 2 SC 945	175 739 2
250	Q2501-2502		TRANSISTOR 2 SC 945	175 739 2
251	Q2601		TRANSISTOR 2 SA 733 P	275 032 1
252	Q2602		TRANSISTOR 2 SA 708 Y	986 867 0
253	Q2603		TRANSISTOR 2 SC 945	175 739 2
254	Q2604		TRANSISTOR KSD 73 Y	740 015 3
255	Q2605		TRANSISTOR KSA 614-0	734 815 4
256	Q2606		TRANSISTOR KSC 2331 Y	740 016 1
257	Q2607,2608		TRANSISTOR KSA 931 Y	740 014 6
258	Q2701-2703		TRANSISTOR 2 SC 945	175 739 2
259	Q2801-2803		TRANSISTOR 2 SC 945	175 739 2
260	Q2804,2805		TRANSISTOR KSA 931 Y	740 014 6

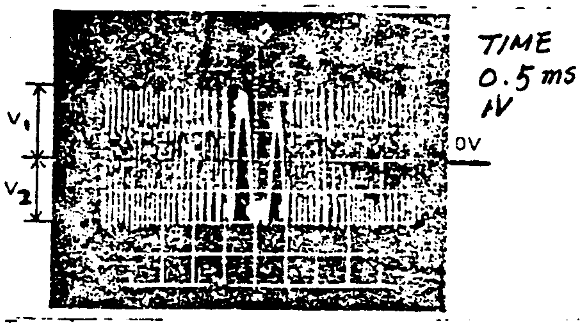
ZEILE	POSITION	SYM	BEZEICHNUNG	ET-NUMMER
261	SW705		TAKT-SCHALTER	740 001 3
262	X2101		QUARZ 8.6436 MHZ	996 919 7
263	X2102		QUARZ, 4 MHZ	732 231 6
264				
265			CASSETTENLAUFWERK,AUFN.-WIEDERG.	733 172 1
266			CASSETTENLAUFWERK,WIEDERGABE	733 171 3
267				
268	1		HEBEL	999 529 1
269	2		HEBEL	999 530 9
270	3		AUFNAHMESCHIEBER	999 531 7
271	4		WIEDERGABESCHIEBER	999 532 5
272	5		RUECKLAUFSCHIEBER	999 533 3
273	6		VORLAUFSCHIEBER	999 534 1
274	7		STOPSCHIEBER	999 535 8
275	8		PAUSESCHIEBER	999 536 6
276	11		HALTEHEBEL FUER PAUSE	999 537 4
277	12		FEDER	999 538 2
278	13		STOPPEN FUER FEDER	999 539 0
279	14		FEDER	999 540 8
280	20		HEBEL FUER AUTO-STOP	999 541 6
281	22		FEDER	999 542 4
282	23		MIKRO-SCHALTER	999 543 2
283	27		KOPFTRAEGER	999 544 0
284	28		FUEHLER AUTOSTOP	999 545 7
285	30		FEDER	999 546 5
286	31		TRAEGER FUER LOESCHKOPF	999 547 3
287	34		FEDER	999 548 1
288	35		ANDRUCKROLLE	999 549 9
289	36		FEDER FUER ANDRUCKROLLE	999 550 7
290	39		RUTSCHKUPPLUNG	999 551 5
291	42		RIEMEN	999 552 3
292	44		SCHWUNGMASSE	999 553 1
293	46,47,82		HEBEL FUER ZWISCHENRAD	999 554 9
294	47		ZWISCHENRAD	999 577 0
295	49		ZWISCHENRAD	999 555 6
296	50		FEDER	999 556 4
297	51		WICKELTELLER,LINKS	999 557 2
298	52		WICKELTELLER,RECHTS	999 558 0
299	53		AUFNAHMESPERRE	999 559 8
300	54		FEDER	999 560 6
301	58		MOTORPULLY	999 572 1
302	59		ANTRIEBSRIEMEN	999 561 4
303	62		AUSWURFHEBEL	999 562 2
304	63		FEDER FUER AUSWURF	999 563 0
305	64		FEDER	999 564 8
306	66		A/W-KOPF	999 565 5
307	67		LOESCHMAGNET	999 566 3
308	68		MOTOR	732 717 4
309	76		SCHRAUBE FUER KOPF	999 568 9
310	77		SCHRAUBE FUER AZIMUTH	999 569 7
311	82		SICHERUNGSSCHEIBE 1,2X3X0,25 MM	986 045 3
312	83		SICHERUNGSSCHEIBE 1.4XX4X0.3 MM	946 940 4
313	84		SICHERUNGSSCHEIBE 2 MM	987 250 8
314	87		HEBEL	999 570 5
315	89		STANGE FUER KNOEPFE	999 571 3
316				
317			PLATTENSPIELER :	
318				
319	54		MAGNET-SYSTEM AT 71	952 894 4
320	42		NADELTRAEGER DIAMANT ATN71	952 895 1
321	49		PUCK REDUZIERST	177 551 9
322				
323	1		GEHAEUSE	740 903 0
324	2		TELLERACHSE	740 904 8
325	6		KURVENRAD	733 954 2
326	10		SCHRAUBE FUER KURVENRAD	733 926 0
327	11		LIFTARM	733 927 8
328	13		HEBEL	733 928 6
329	17		HEBEL	733 929 4
330	20		TONARMSTUETZE	733 930 2
331	21		SCHALTARM	733 931 0
332	23		MIKROSCHALTER	733 932 8
333	24		SCHALTHEBEL	733 933 6
334	28		KNOPFHALTER	733 934 4
335	29		FEDER	733 935 1
336	30,33		KNOPF	740 905 5
337	32		SCHALTER 33/45	740 906 3
338	34		MOTOR BFF 2R90T	732 734 9
339	37		MOTORPULLY	733 939 3
340	38		ABSCHALTHEBEL	733 940 1
341	39	A	SICHERUNGSSCHEIBE 3 MM	987 251 6

ZEILE	POSITION	SYM	BEZEICHNUNG	ET-NUMMER
342	40		ZIERLEISTE MIT SCHRIFT	740 907 1
343	41		TELLERBELAG	733 947 6
344	43		RIEMEN	733 942 7
345	44		TELLERBELAG	733 947 6
346	45		ABDECKHAUBE	740 908 9
347	46		ZIERPLATTE FUER ABDECKHAUBE	740 909 7
348	47		GUMMI FUER HAUBE	733 945 0
349	48		SCHARNIER	733 946 8
350	50		TONARM	740 910 5
351	57		GEH FUSS	121 203 4
352	58		LIFTHEBEL	733 951 8
353	66		BODEN	740 911 3
			IC LA 5515	733 953 4

ENDE

4. E.F. Balance-Abgleich:

Oszillator an TP 5 anschließen, Bereich DC 0V.
R 2326 an X nach Masse legen.
Mit VR 2101 auf Symetrie zur 0-Linie abgleichen.

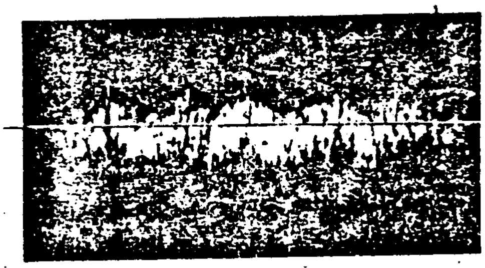


5. Tracking Gain-Abgleich:

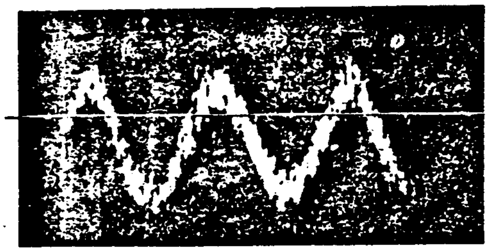
Oszillator an TP 5 anschließen.
Mit VR 2302 leichte Welligkeit einstellen.

Time/DIV
0.5 MS/DIV

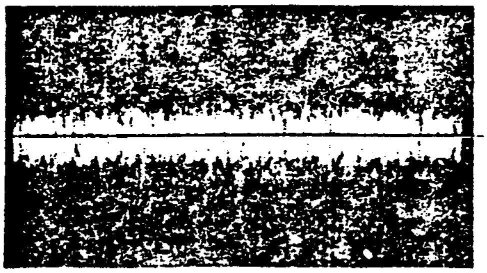
VOLT/DIV
0.5 V/DIV



richtig



falsch



falsch

Nach oben gemachter Abgleich.

Oszillator an TP 3 anschließen.

- nur kontrollieren -

Spannung soll 0.5 - 1 V SS betragen.

Technische Information Nr. 77/88

Verteiler:

Werkstattleiter ☒
Ausbild.-Techn. ☒
Techniker ☒
Lageristen ☒

Betrifft:

Musik-Center
Best.-Nr. 036.443 0

2975

Sollten noch Geräte mit CD-Fehlern in die Werkstatt kommen, so sind folgende Punkte, der Reihe nach, zu beachten.

1. Das Gerät ist neu abzugleichen.
2. Sollte der Abgleich keinen Erfolg bringen, dann ist das
   IC 2105 MC 6805 P 4
   auszutauschen.

   Neues IC 2105 MC 68705 P 3 S
   Neue ET-Nr.: 742 982 2 einbauen.

   Abgleich wiederholen.

   Betrifft die Typen VTCF CD 4676 und 4676 "A" nicht "B".
3. Sollte Punkt 1 und 2 noch keinen Erfolg bringen, dann sind die Werte der Widerstände und Kondensatoren für die Zeitkonstante der Laserabtasteinheit MLP - 7 oder MLP - 9 laut Tabelle zu überprüfen und evtl. die richtigen Werte einzulöten.

ABGLEICH:

Taste CD - ON drücken

1. VCO-Abgleich:
   Frequenzzähler an TP 8 anschließen.
   TP EFMX mit Masse verbinden.
   Mit L 2104 4.320 - 4.330 MHz einstellen.
2. Focus Offset-Abgleich:
   Oszillator an TP 4 anschließen. Bereich DC 0V.
   TP 6 an Masse legen.
   Mit VR 2401 0 V + 10 mV einstellen.
3. Tracking Offset-Abgleich:
   Oszillator an TP 3 anschließen. Bereich DC 0V.
   TP 5 an Masse legen.
   Mit VR 2301 0 V + 10 mV einstellen.

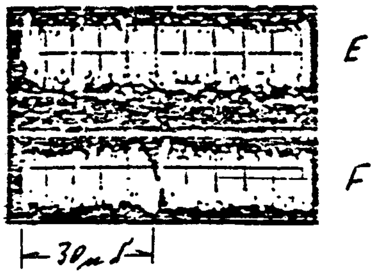
CD-Platte einlegen, Play-Taste drücken.

Nachdruck nicht gestattet

30 09 88

8. **Nur Kontrolle:**

   2-Kanal-Oszillator an
   TP 2 und R 2107 an X anschließen.
   Ersten Kanal trickern.



20 mV/DIV
10 µS/DIV

Technisches Büro

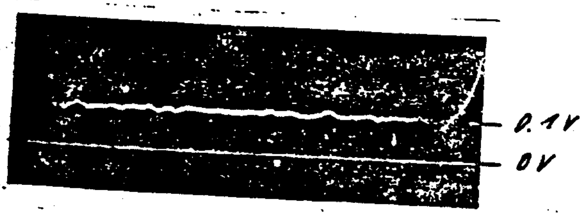
Witt

Seite 5: Abgleich-Punkte
Seite 6: Tabelle

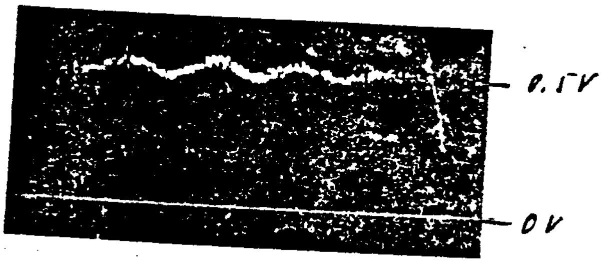
6. Focus Gain-Abgleich:

Oszillator an TP 6 anschließen.
Mit VR 2402 0 V 0.1 V einstellen.

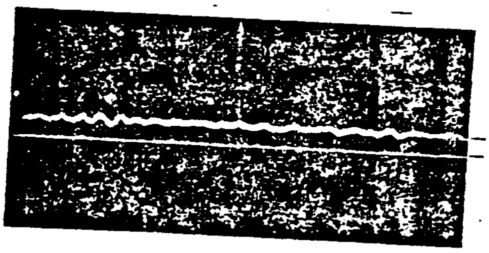
0.5 MS/DIV
0.1 V/DIV



gut



zu niedrig

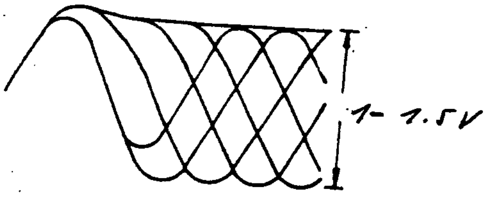


zu hoch

Nach Abgleich an TP 3 kontrollieren:
Spannung soll 0.5 V - 1 V SS betragen.

7. Jitta-Abgleich:

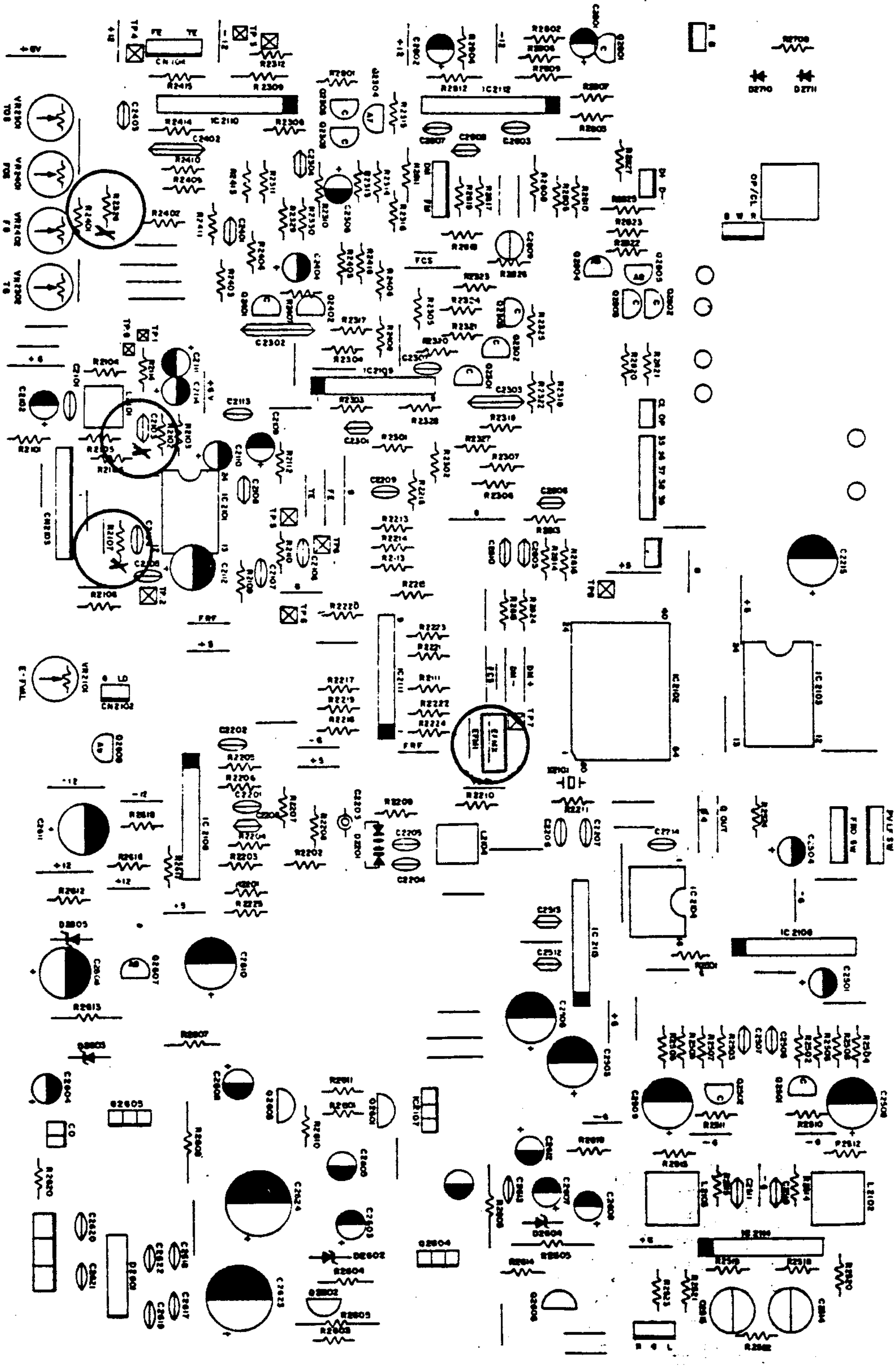
Oszillator an C 2103 an X anschließen, nur Kontrolle.



0.5 uS/DIV
0.5 V/DIV

Falls die Spitzen verrauscht sind, an TP 1 kontrollieren, ob 100 pF nach Masse eingelötet sind, sonst einlöten.

ABGLEICH-PUNKTE


+6V
IC 2110
IC 2112
IC 2106

TABELLE

1. THE FINAL TIME-CONSTANT FOR EACH LASTER-PICK-UP

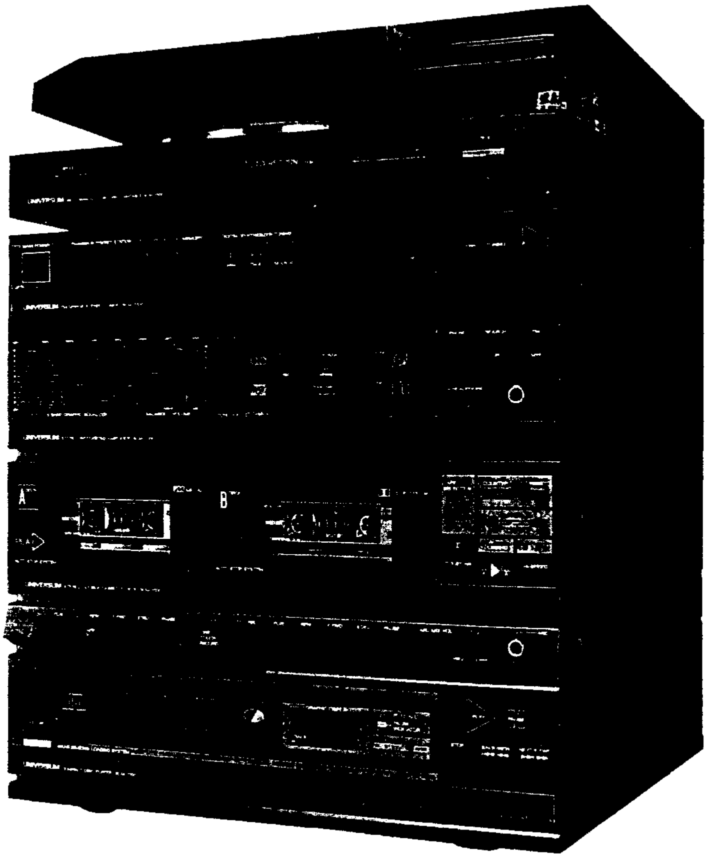
NO	LOCATION NO	MLP - 7	MLP - 9
1	R 2404	1/8 P 330 K OHM	1/8 P 470 K OHM
2	R 2304	1/8 P 27 K OHM	1/8 P 56 K OHM
3	R 2317	1/8 P 6.8 K OHM	1/8 P 33 K OHM
4	R 2411	1/8 P 1.8 K OHM	1/8 P 22 K OHM
5	R 2301	1/8 P 1.8 K OHM	1/8 P 3.9 K OHM
6	R 2323	1/8 P 39 K OHM	1/8 P 22 K OHM
7	R 2410	1/8 P 220 K OHM	1/8 P 150 K OHM
8	R 2409	1/8 P 22 K OHM	1/8 P 56 K OHM
9	R 2302	1/8 P 56 K OHM	1/8 P 100 K OHM
10	R 2403	1/8 P 180 K OHM	1/8 P 1.5 K OHM
11	R 2305	1/8 P 39 K OHM	1/8 P 68 K OHM
12	R 2308	1/8 P 330 K OHM	1/8 P 270 K OHM
13	R 2329	1/8 P 680 K OHM	1/8 P 270 K OHM
14	R 2106	1/8 P 18 K OHM	1/8 P 22 K OHM
15	R 2102	1/8 P 22 K OHM	DIODE 1SS53
16	R 2401	1/8 P 220 K OHM	1/8 P 100 K OHM
17	R 2801	1/8 P 8.2 K OHM	1/8 P
18	R 2804		
19	+ 5 V R - X (MAIN P.C.B)	- 5.6 OHM	5.6
20	C 2301	M/C 0.018 ■ F	M/C 0.082 ■ F
21	C 2401	M/C 0.068 ■ F	M/C 0.018 ■ F
22	C 2402	M/C 0.22 ■ F	M/C 0.15 ■ F
23	C 2109	E/C 0.47/50V	M/C 0.047 ■ F
24	C 2302	M/C 0.33 ■ F	M/C 0.1 ■ F
25	C 2307	C/C 100 PF	C/C 100 PF
26	L. D.		56 OHM

2975

Technische Unterlage

Technischer Kundendienst

036.4430



BESTELL-NR.	0364430
GERAETEBEZEICHNUNG	UNIV.-MUSIK-CENTER
WARENGATTUNG	652
AUSFUEHRUNGS-NR.	001
GERAETEBESCHREIBUNG	2X45W,MIT BOXEN
PRIVILEG	VTCFCD4676
LIEFERANTEN-NR.	205476
PREIS	998.00
KATALOG	872-872
GARANTIEZEIT	6
KD-SEKTOR	R
HEIM/BRINGE	WERKSTATT
BETREUUNG	EIGEN
KOSTENTRAEGER	EIGEN
REPARATURFAEHIG	JA

6700-451/1184

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Kundendienstzentralleitung Ulmenstraße 52 **Nürnberg**

Nachdruck nicht gestattet
Änderungen vorbehalten

F/S 872 Aug.87

Bei allen Reparaturen sind die gültigen Sicherheitsvorschriften zu beachten!

2975

4-1. SEPERATION ADJUSTMENT (SETING; FUNCTION SW: FM STEREO)

STEP	SIGNAL SOURCE CONNECT TO	SET SIGNAL TO	CONNECT TO	SET DIAL TO	ADJUST	ADJUST FOR
1	FM SIGNAL GEN. FM ANT. TERMINAL	(UNMODULATED) 98MHz INPUT: 60dB MOD: PILOT: 7.5KHz MAIN: 67.5KHz	V.T.V.M FM DET. OUTPUT OR SPEAKER TERMINAL	98MHz	VR 305 (SEPERATION CONTROL)	MAXIMUM SEPERATION

B. DECK SECTION

SPECIFICATION OF ADJUSTMENT FOR DOLBY CASSETTE DECK AMPLIFIER

o HEAD HEIGHT/AZIMUTH ADJUSTMENT

1. PURPOSE

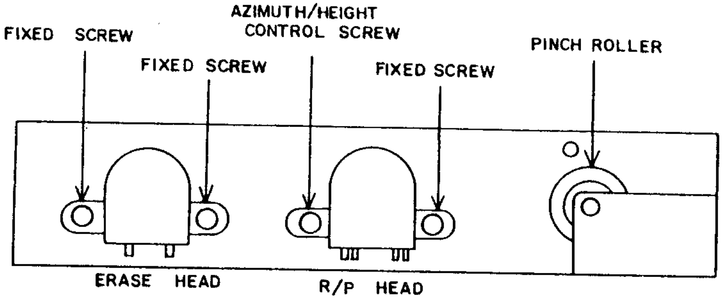
THE PURPOSE OF THIS ADJUSTMENT IS TO OBTAIN GOOD FREQUENCY RESPONSE AND TO IMPROVE CHANNEL BALANCE BY ADJUSTING HEAD TO THE PROPEREST POSITION.

2. METHOD

THE HEAD HEIGHT/AZIMUTH ADJUSTMENT SCREW IS LOCATED ON THE LEFT SIDE OF R/P HEAD (SEE. FIGURE). BEFORE ADJUSTING, SEMI-FIXED RESISTOR SHOULD BE LOCATED AT THE MAXIMUM CONDITION.

ADJUST HEAD AS FOLLOWS

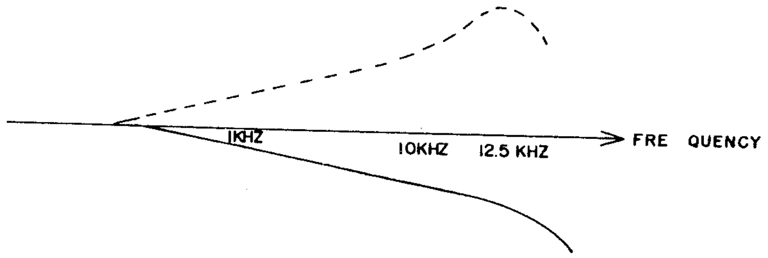
1) CONNECT 2CH VOLTMETER AND/OR OSCILLOSCOPE TO THE TAPE OUTPUT TERMINAL OF BOTH R CHANNEL AND L CHANNEL.
2) PLAY 12.5kHz AZIMUTH TEST TAPE.
3) WITH A SCREW DRIVE TURN ADJUSTMENT SCREW SLOWLY FOR THE MAXIMUM OUTPUT OF LEFT CHANNEL AND AT THE SAME TIME BOTH CHANNEL HAVE THE SAME PHASE.
4) SEAL ADJUSTMENT SCREW WITH GLYPTAL OR OTHER SIMILAR NON-HARDENING CEMENT.



(FRONT VIEW)

3. CAUTION

DO NOT APPLY PRESSURE DURING ADJUSTMENT BECAUSE IT MAY EFFECT ACCURACY.



WHEN RECORDING, AS FREQUENCY BECOMES HIGHER, THE CHARACTERISTIC OF HEAD IS DECREASED COMPARE WITH THE REFERENCE LEVEL OF MID-FREQUENCY. SO, IT IS NECESSARY TO BOOST THE LEVEL OF HIGH FREQUENCY TO OBTAIN GOOD RESPONSE BY COMPENSATING AS ABOVE FIGURE. THE COMPENSATING CHARACTERISTIC OF BOOSTING CIRCUIT (SHOWN AS DASHED CURVE) SHOULD BE SYMMETRIC WITH THAT OF HEAD CHARACTERISTIC (SAME MAGNITUDE AND REVERSE IN DIRECTION). THE WAY OF BOOST RECORDING LEVEL OF HIGH FREQUENCY IS TO INSPERT LC CIRCUIT IN PARALLEL WITH OUTPUT OF DOLBY-IC AND INCREASE OUTPUT GAIN OF DOLBY-IC AS FREQUENCY INCREASES BY CONTROL THE IMPEDANCE OF IC CIRCUIT.

PERFORM THE ADJUSTMENT AS FOLLOWS

1) SET SWITCH S701 TO RECORD S1602 TO NORMAL, AND CD POSITION.
2) DISCONNECT +B LINE FROM OSCILLATOR SO THAT IT CAN NOT OSCILLATE WHILE RECORDING. (IT CAN BE EASILY DONE BY TAKING LEAD FASTEN OF B+ LINE OFF).
3) CONNECT A VOLTMETER AND AN OSCILLOSCOPE BETWEEN TEST POINT "TP13 (TP14)" AND GROUND.
4) SUPPLY 100mV INPUT SIGNAL OF 1kHz THROUGH CD INPUT CONNECTOR WIRE AND ADJUST RECORD LEVEL CONTROL FOR VU-METER INDICATE −20dB.
5) CHANGE INPUT SIGNAL OF 1kHz TO 14kHz.
6) ADJUST L701 (S751) FOR VOLTMETER INDICATE MAXIMUM LEVEL AT 14kHz.
7) REPEAT ABOVE PROCEDURE FOR THE OTHER CHANNEL.

o BIAS FREQUENCY ADJUSTMENT

1. PURPOSE

PURPOSE OF THIS ADJUSTMENT IS TO OBTAIN STABLE FREQUENCY RESPONSE' GOOD ERASING EFFECT AND LOW DISTORTION BY KEEPING CONSTANT BIAS FREQUENCY AND OSCILLATING FREQUENCY.

2. METHOD

1) SET SWITCH S701 TO RECORD, S1602 TO NORMAL POSITION.
2) INPUT SIGNAL IS NOT NECESSARY FOR THIS ADJUSTMENT.
3) CONNECT A FREQUENCY COUNTER BETWEEN TEST POINT "D" AND GROUND.
4) ADJUST T1601 FOR A READING OF 105KHz ON THE COUNTER.

o BIAS VOLTAGE ADJUSTMENT

1. PURPOSE

PURPOSE OF THIS ADJUSTMENT IS TO OBTAIN STABLE FREQUENCY RESPONSE, GOOD EARSING EFFECT AND LOW DISTORTION BY KEEPING CONSTANT BIAS CURRENT.

2. METHOD

1) SET SWITCH S701 TO RECORD, SWITCH S1602 TO NOR POSITION.
2) CONNECT A VOLTMETER AND AN OSCILLOSCOPE BETWEEN TEST POINT "TP13 (TP14)" ("B") AND GROUND.
3) INPUT SIGNAL IS NOT NECESSARY FOR THIS ADJUSTMENT.
4) ADJUST SEMI-FIXED RESISTOR VR1629 (VR1630) UNTIL VOLTMETER INDICATES 42mV OF READING.
5) REPEAT ABOVE PRECEDURE FOR THE OTHER CHANNEL.

C. CDP SECTION

- BE SURE TO FOLLOW CAREFULLY THE INSTRUCTION BELOW BEFORE SERVICING AND ADJUSTMENT.

– PROTECTION OF EYES FROM LASER BEAM DURING SERVICING –

WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE (THAN 30cm) FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

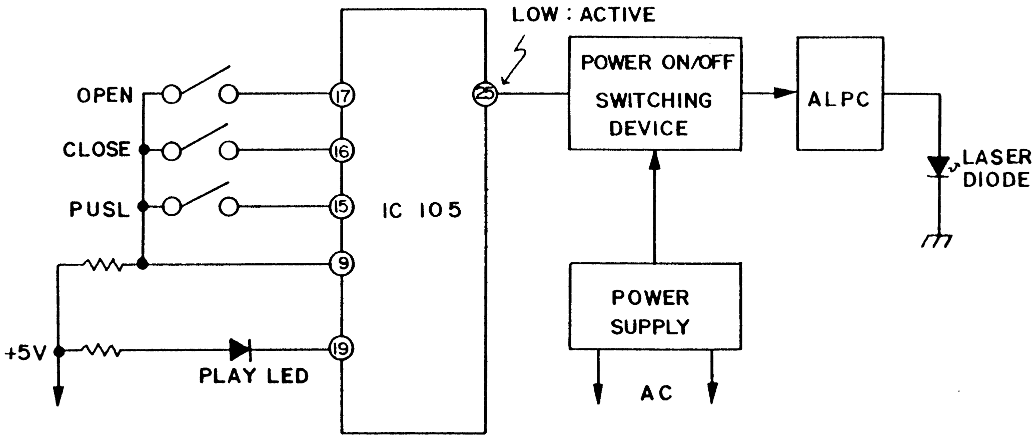
– SAFETY INTERLOCK–

The compact disc player reads the disc signal by detecting the laser beam. It must be avoided for the human body to be exposed to the laser beam. Especially the human eyes can be badly affected by the laser beam. Therefore, the unit is equipped to prevent the unnecessary laser output. The laser beam outputs are controlled by the pin 25 of IC2105 (one chip microcomputer). When the pin 25 is LOW, the laser diode emits the laser beam. On the contrary, when the pin 25 is HIGH, the laser diode does not emit the beam. After the unit is powered, the unitial state of pin 25 is HIGH.

The laser diode emits the beam when the following conditions are met.

1) The Disc tray is perfectly closed (The leaf switch of the close sensor is short).
2) The optical pick up is located at the vicinity of the disc driving motor (The leaf switch of the pick-up slide limiter (PUSL) sensor is short).

If the disc is not found, the pin 28 of IC 105 goes state HIGH not to emit the laser beam. If the disc is loaded in the set, the set reads the directory of the disc with laser beam. After reading the directory, the pin 25 is returned to be HIGH. When PLAY key is pressed, the PLAY INDICATOR is turned on and the laser diode emits the beam again.



– CAUTION FOR ELECTROSTATIC BREAKDOWN–

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

The printed matter below is included in the repair parts. During repair, use the procedure in the printed matter.

The following method is an example for reference purposes:

1. Place a conductive sheet on the workbench.
   (The black sheet used as repair parts wrapping).
2. Place the set on the conductive sheet so that the chassis touches the sheet. (This makes it the same potential as the conductive sheet).
3. Place your hands on the conductive sheet. (This makes them the same potential as the sheet).
4. Remove the optical pick-up block from the bag (conductive).
5. Perform work on top of the conductive sheet. Be careful that clothing does not touch the optical pick-up block.

ADJUSTMENT PROCEDURES

1. CONFORMING LASER OUTPUT

1) Make the LASER output section visible by removing the flap disc clamp.
2) Switch on the power and press PLAY key once to get the LASER output. Applying the sensor of optical power meter to the objective lens, make sure that the output is in the range of 0.25mW and 0.5mW.
3) Reinstall the flap disc clamp.

2. PLL FREE RUN FREQUENCY ADJUSTMENT

1) Short between the R2114 and GND, power on and set the unit STOP mode.
2) Connect a DC voltmeter between center lead of D2201 (SVC-211) and GND, and check that voltage is 2.4V to 2.6V.
3) Connect the frequency counter between test pin TP8 and GND, and rotate the core of the PLL OSC coil (L2104) with a plastic screwdriver so that frequency is 4.320 MHz to 4.330MHz.

3. FOCUS OFFSET ADJUSTMENT

1) Power on and set the unit STOP mode.
2) Connect a DC voltmeter and oscilloscope between test pin TP. 4 and GND.
3) Adjust VR2401 so that the indication of DC voltmeter and oscilloscope is ± 10mV.

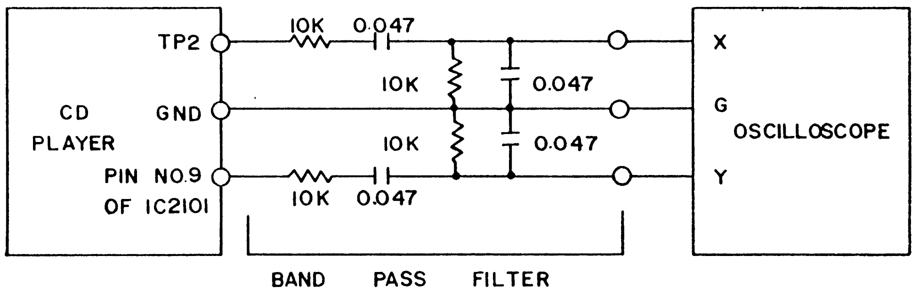
4. TRACK OFFSET ADJUSTMENT

1) Power on and set the unit STOP mode.
2) Connect a DC voltmeter and oscilloscope between test pin TP. 3 and GND.
3) Adjust VR2301 so that the indication DC voltmeter and oscilloscope is ± 10mV.

5. DIFFRACTION GRID ADJUSTMENT

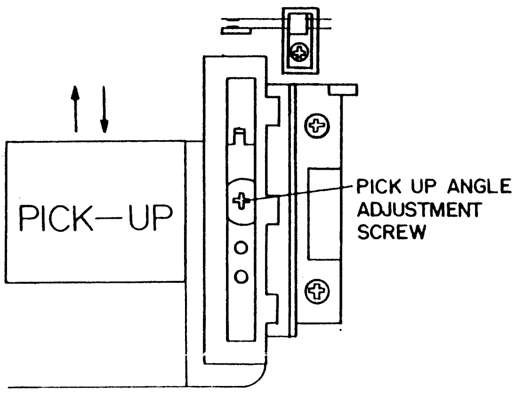
This is a precise adjustment and must be made carefully.

1) Connect AC voltmeter between test pin TP. 5 and GND.
2) Turn the power on, load a disc and set the unit STOP mode.
3) Press PLAY/PAUSE key.
4) PLAY LED will flas. Short between the pin No. 4 of IC 2109 and GND.
5) Connect the set and oscilloscope according to the picture below.



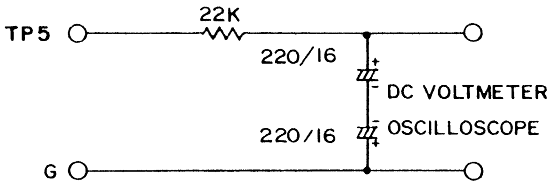
6. ADJUSTMENT OF PICK UP ANGLE

1) Turn the power on, load a disc and select a music that is intermediate position of disc.
2) Connect the oscilloscope or jitter counter between test pin TP 1 and GND.
3) Play a music and monitor the waveform of TP 1 and rotate the angle adjustment screw so that the waveform is at its maximum.



7. E-F BALANCE ADJUSTMENT

1) Turn the power on, load a disc and set the unit STOP mode.
2) Short between the pin No. 9 of ic 2101 and GND.
3) Connect a dDC Voltmeter and occilloscope to the test pin TP 5 though low pass filter shown below.
4) Set the unit PLAY mode, adjust VR2101 so that the DC voltmeter and oscilloscope i: 0V ~ –15mV.

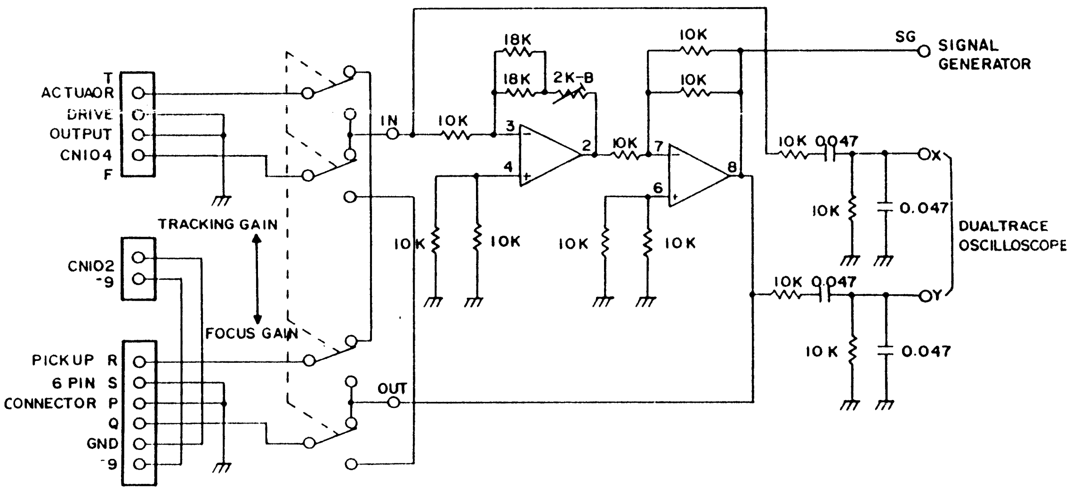


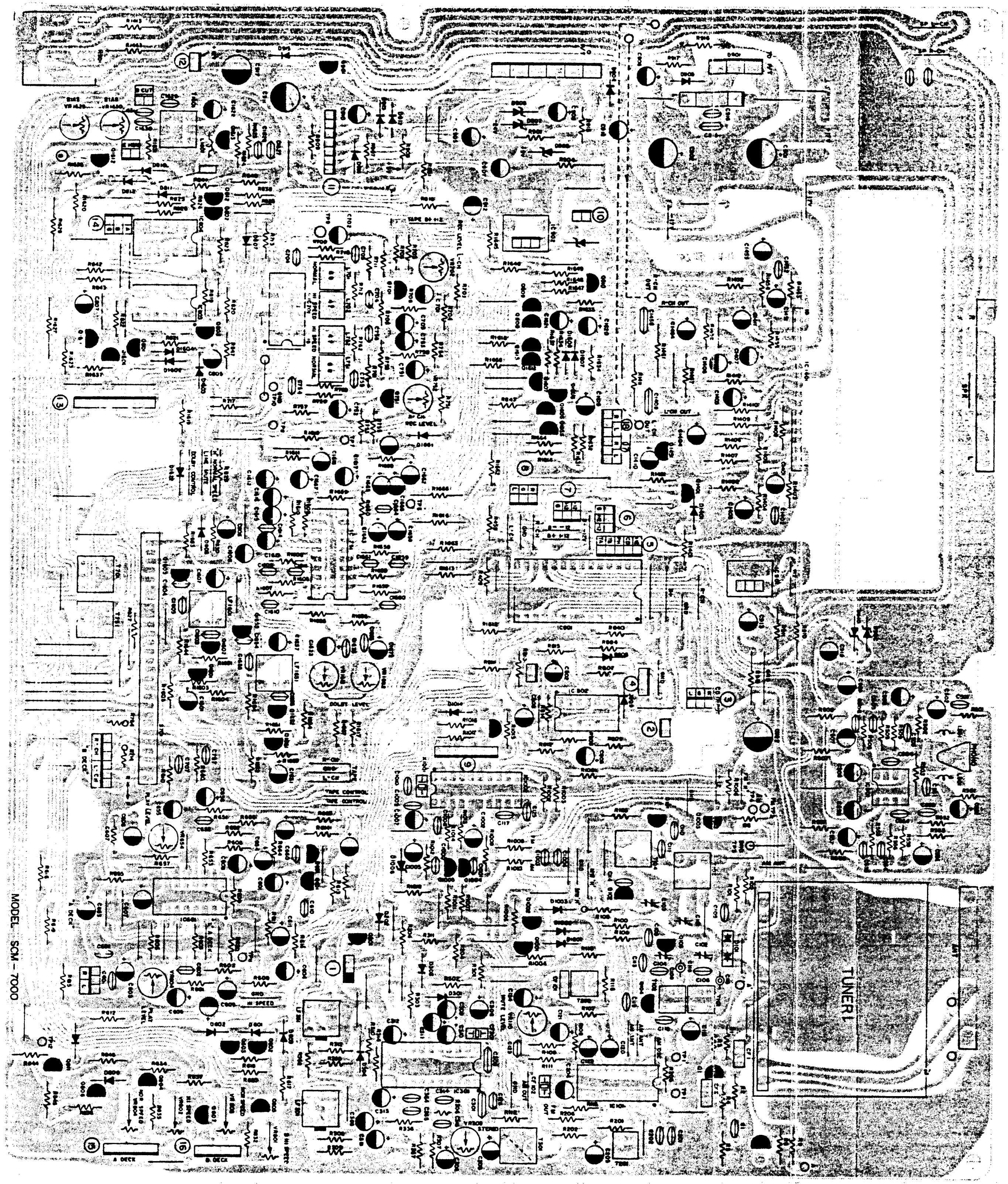
8. ADJUSTMENT OF FOCUS/TRACKING GAIN

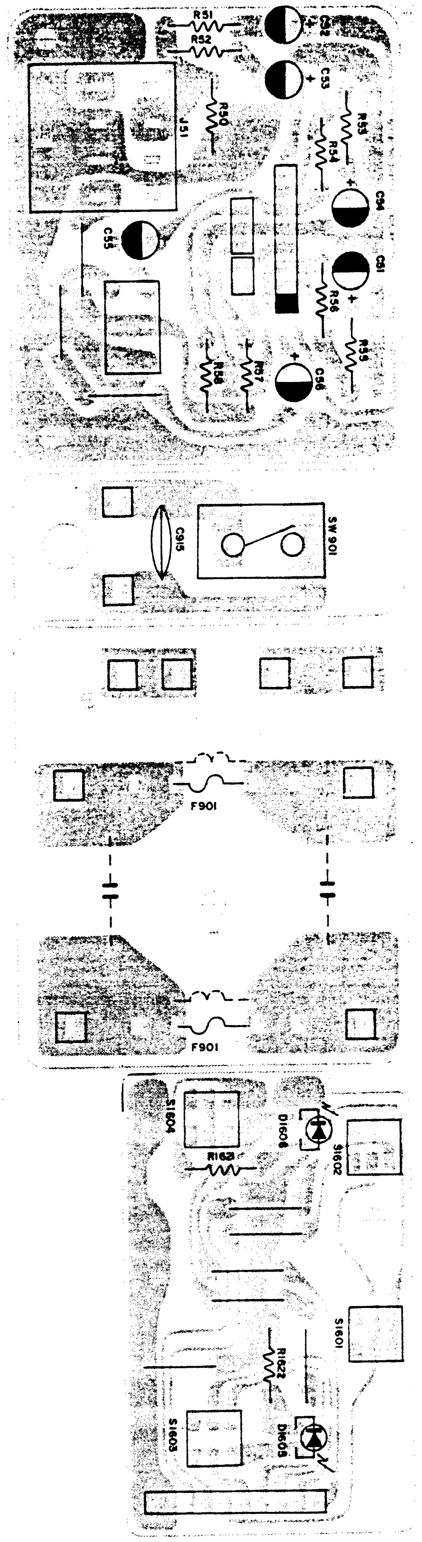
The measurement circuit shown below is necessary for accurate adjustment of the focus and tracking gain.

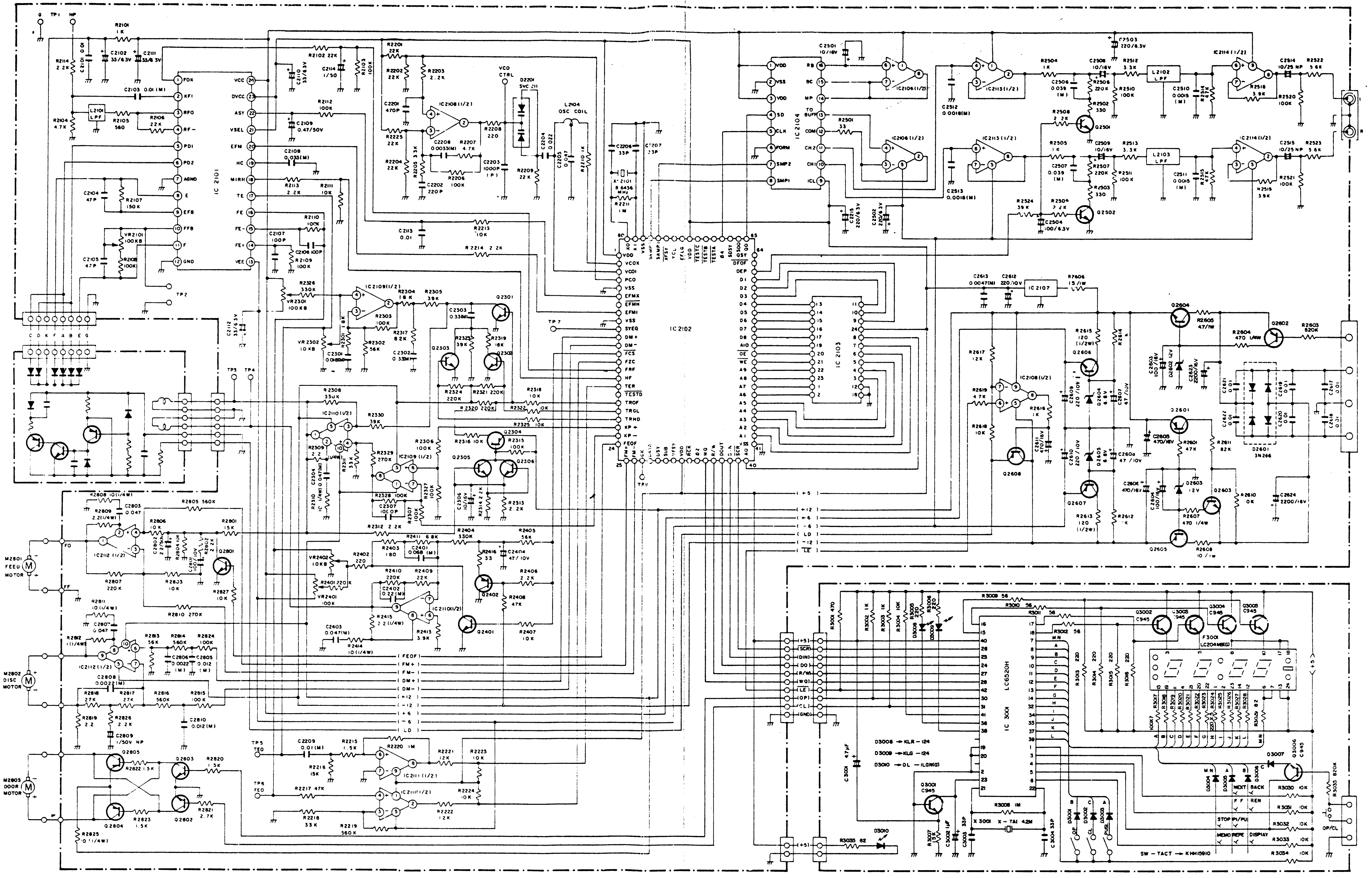
- Focus gain adjustment
  1) Connect the measurement circuit shown below, turn the power on, load a disc and set the unit PLAY mode.
  2) Apply a 900Hz, 0.5Vp-p signal from signal generator.
  3) Observe the resurge wave forms on the oscilloscope, and adjust VR2402 so that the phase difference of output of X and Y from the measurement circuit is 90°.

- Tracking gain adjustment.
  1) Adjustment is made in the same manner as for focus gain.
     But the input from the frequency generator is set to 1800Hz 0.5Vp-p, and VR2402 is adjusted so that the phase difference is 90°.




MODEL SCM-7000
TUNER1
TAPE CONTROL
A DECK
B DECK
STEREO


R51
R52
C53
C54
C55
C56
C61
J51
SW901
C815
F901
F901
S1601
S1602
S1603
S1604
R1621
R1622
D1605
D1606


IC 2101
IC 2102
IC 2103
IC 2104
IC 3001
LC6520H
IC2106 (1/2)
IC2108 (1/2)
IC2109 (1/2)
IC2110 (1/2)
IC2111 (1/2)
IC2112 (1/2)
IC2113 (1/2)
IC2114 (1/2)
IC 2107
L2101 LPF
L2102 LPF
L2103 LPF
L2104 OSC COIL
VCO CTRL
X2101 8.4672 MHz
X 3001 X - TAI 4.2M
D2601 3N246
F3001 LC204MB(G)
M2801 FEED MOTOR
M2802 DISC MOTOR
M2803 DOOR MOTOR
TP1
TP2
TP3
TP4
TP5 TEO
TP6 FEO
TP7
(FEOF)
(FM+)
(FM-)
(DM+)
(DM-)
(+12)
(-12)
(+6)
(-6)
(LD)
(+5)
(SCR)
(DIN)
(DO)
(R/W)
(WQ)
(LE)
(OP)
(CL)
(GND)
D3008 → KLR - 124
D3009 → KLG - 124
D3010 → DL - ILGN(G)
STOP
P/PU
MEMO
REPE
DISPLAY
NEXT
BACK
F F
REN
OP/CL
SW - TACT → KHH15910

NOTES : D3001 , D3002 , D3003 , D3004 , D3005 , D3006, D3007 → ISS53
Q2301, Q2302, Q2303, Q2305, Q2306, Q2401, Q2501,
Q2502 , Q2603, Q2801 , Q2802 , Q2803 → KSC945
Q2304, Q2402, Q2601 → KSA733 Q2606 → KSC 2331
Q2607, Q2608, Q2804, Q2805 → KSA931
Q2604 → KSD 73 Q2605 → KSA 614
Q2602 → KSA614

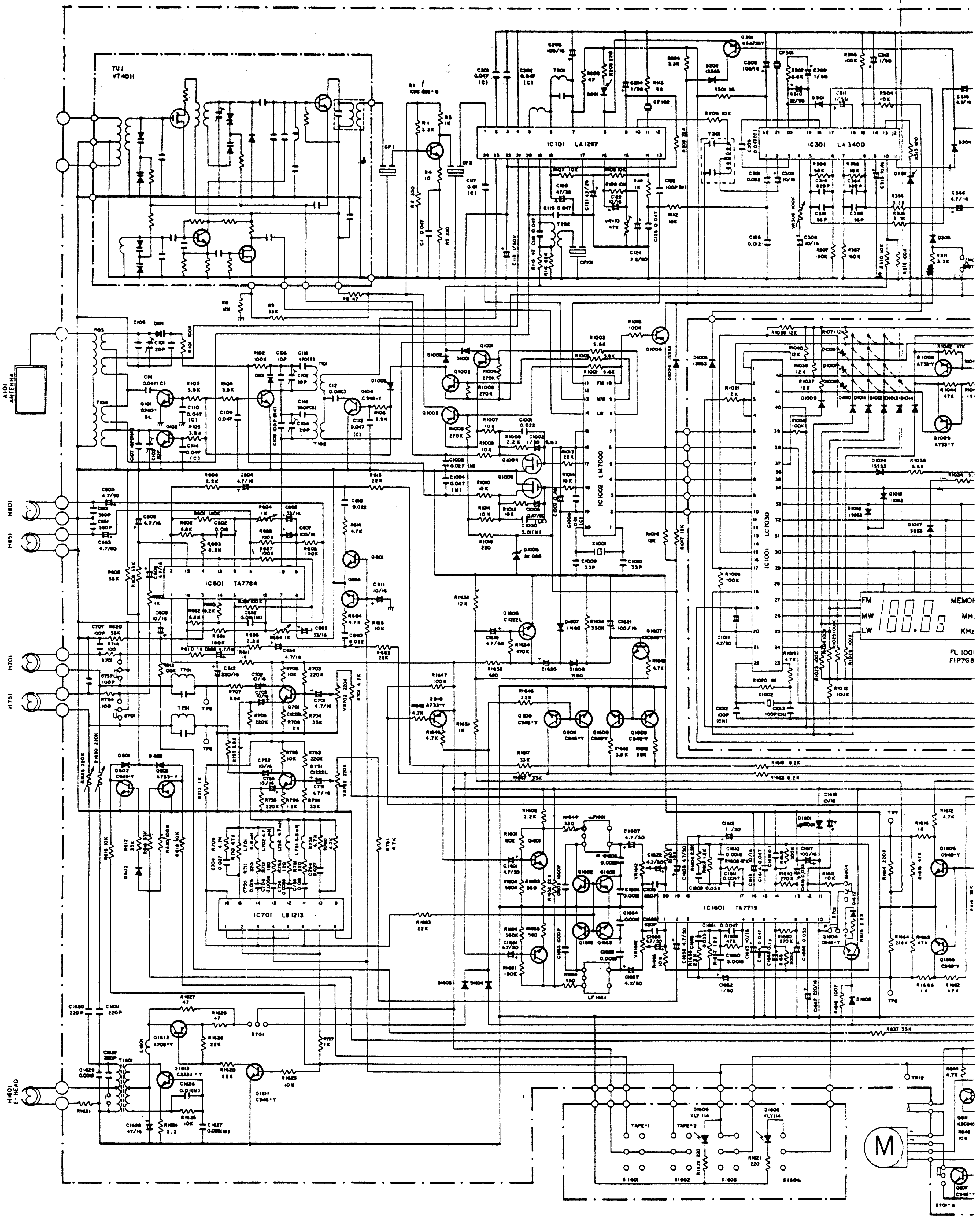
IC 2101	CX20109
IC 2102	YM3805
IC 2103	TC5517BF - 20
IC 2104	YM3015

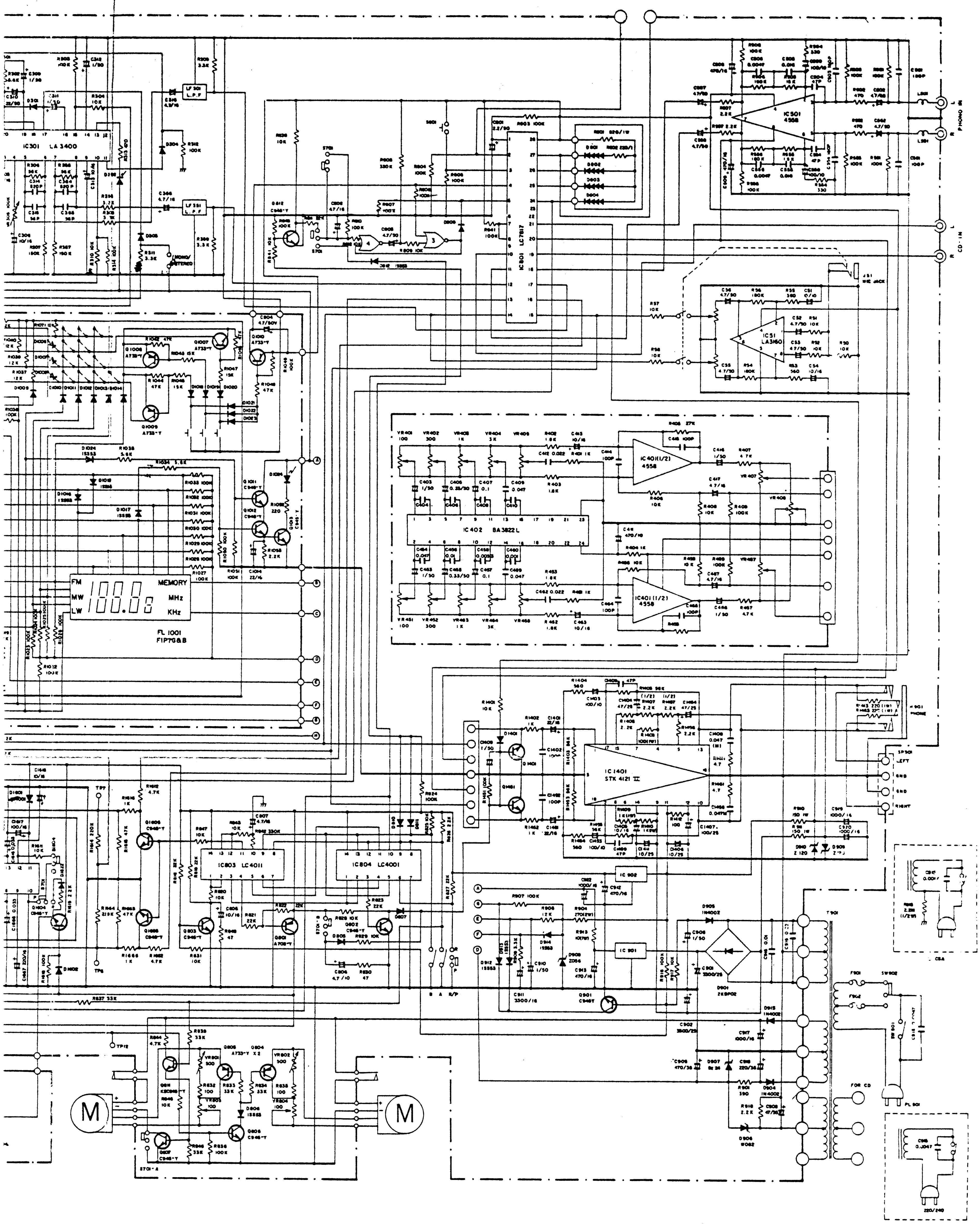
IC2106 , IC 2108 , IC 2109, IC2113, IC 2114
→ NJM2068SD / μPC 4570HA
IC2110 , IC2112 → TA7256P
IC 2111 → TC75393 / NJM2903S
IC 2107 → L78M05 / LM7805

1. ALL RESISTANCE VALUES ARE INDICATED IN OHM AND 1/8W UNLESS OTHERWISE NOTED, K = KILLO OHMS M = MEGA OHMS
2. ALL CAPACITANCE VALUES ARE INDICATED IN MICRO FARADS, P = PICO FARADS.
3. ELECTROLYTIC CAPACITANCE VALUES ARE CAPACITANCE (μF WORKING VOLTAGE)

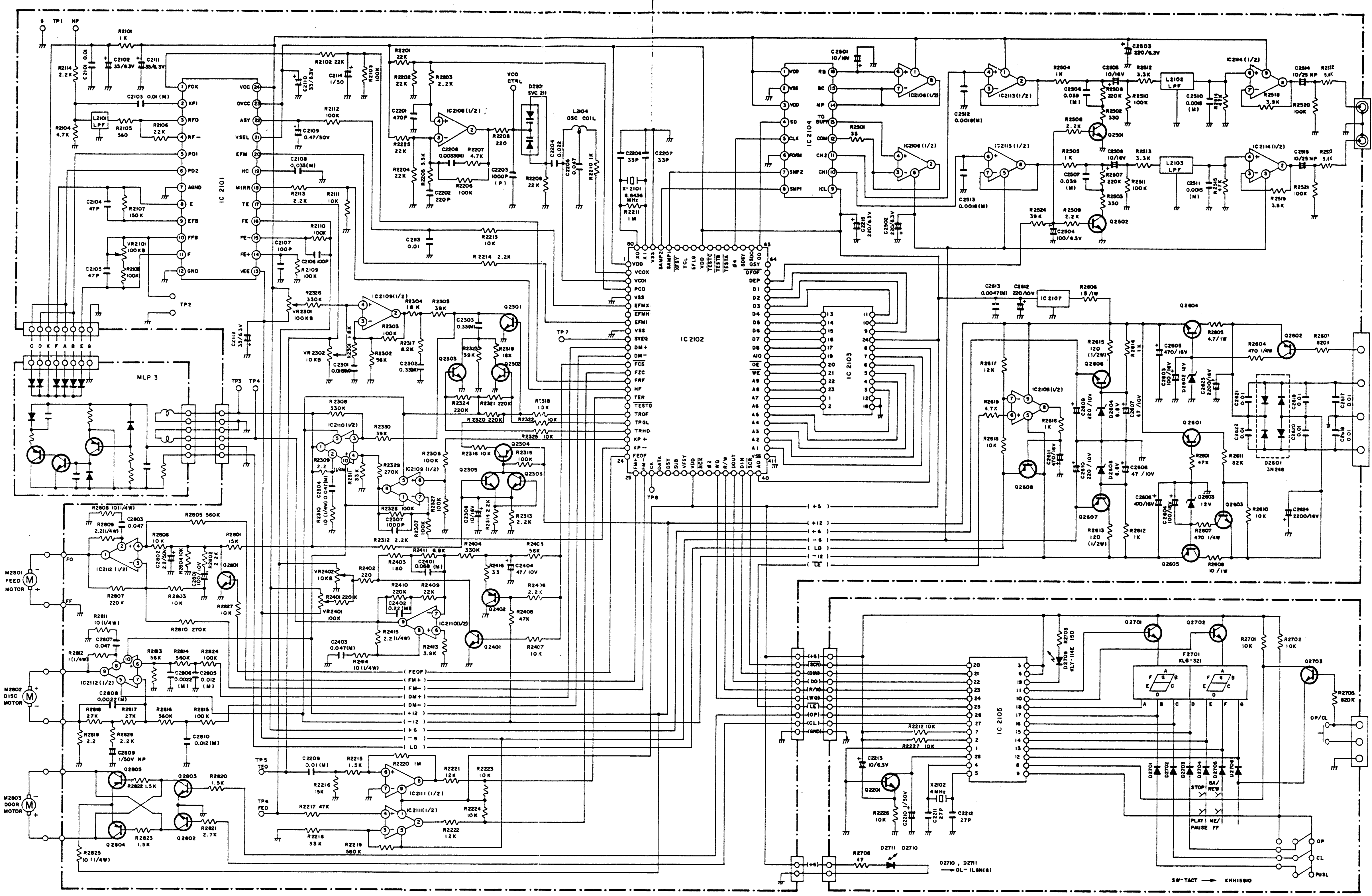
MODEL : SCM - 7500

MAIN SCHEMATIC


TUJ
VT4011
IC101 LA1267
IC301 LA3400
A101 ANTENNA
IC1002 LM7000
IC1001 LC7030
IC601 TA7784
IC701 LB1213
IC1601 TA7719
H601
H651
H701
H751
H1601 E-HEAD
FM
MW
LW
MEMOR
MH
KHz
FL 1001
FIP7G8
TAPE-1
TAPE-2
S1601
S1602
S1603
S1604
M
S701
X1001
X1002


IC301 LA3400
LF301 L.P.F
LF351 L.P.F
MONO/STEREO
IC501 4558
PHONO IN
L
R
CD IN
IC801 LC7817
S701
S801
J51 MIC JACK
IC51 LA3160
IC402 BA3822L
IC401(1/2) 4558
VR401
VR402
VR403
VR404
VR405
VR451
VR452
VR453
VR454
VR455
FM
MW
LW
MEMORY
MHz
KHz
FL 1001
FIP7G8B
IC1401
STK 4121 II
J901 PHONE
SP901
LEFT
GND
RIGHT
IC803 LC4011
IC804 LC4001
IC902
IC901
T901
FS01
FS02
SW902
FOR CD
PL 901
220/240
CSA
M
M
S701-A
S701-B
VR801
VR802
B
A
R/P
A
B
C
D
E
F
G
H

SCHALTBILD


IC 2101
IC 2102
IC 2103
IC 2104
IC 2105
IC 2107
MLP 3
M2801 FEED MOTOR
M2802 DISC MOTOR
M2803 DOOR MOTOR
L2102 LPF
L2103 LPF
L2104 OSC COIL
X2101 8.6436 MHz
X2102 4 MHz
D2201 SVC 211
FL2701 KL8-321
3N246
TP1
TP2
TP5 TEO
TP6 FEO
TP7
TP8
OP/CL
PLAY/PAUSE
NE/FF
STOP
BA/REW
OP
CL
PUSL
SW-TACT → KHH15910
D2710 , D2711 → DL- ILGN(6)

NOTES : D2701, D2702, D2703, D2704, D2705, D2706. → ISS53
Q2201, Q2301, Q2302, Q2303, Q2305, Q2306, Q2401, Q2501,
Q2502, Q2603, Q2701, Q2702, Q2703, Q2801, Q2802, Q2803. → KSC945
Q2304, Q2402, Q2601 → KSA733 Q2606 → KSC 2331
Q2607, Q2608, Q2804, Q2805 → KSA931
Q2604 → KSD73 . Q2605 → KSA614
Q2602 → KSA708

IC 2101 CX20109
IC 2102 YM3805
IC 2103 TC5517BF - 20
IC 2104 YM3015
IC 2105 MC6805-P4/SC376 10P

IC2106, IC2108, IC2109, IC2113, IC2114
→ NJM2068SD / μPC 4570HA
IC2110 , IC2112 → TA7256P
IC2111 → TC75393/NJM2903S
IC2107 → L78M05 / LM7805

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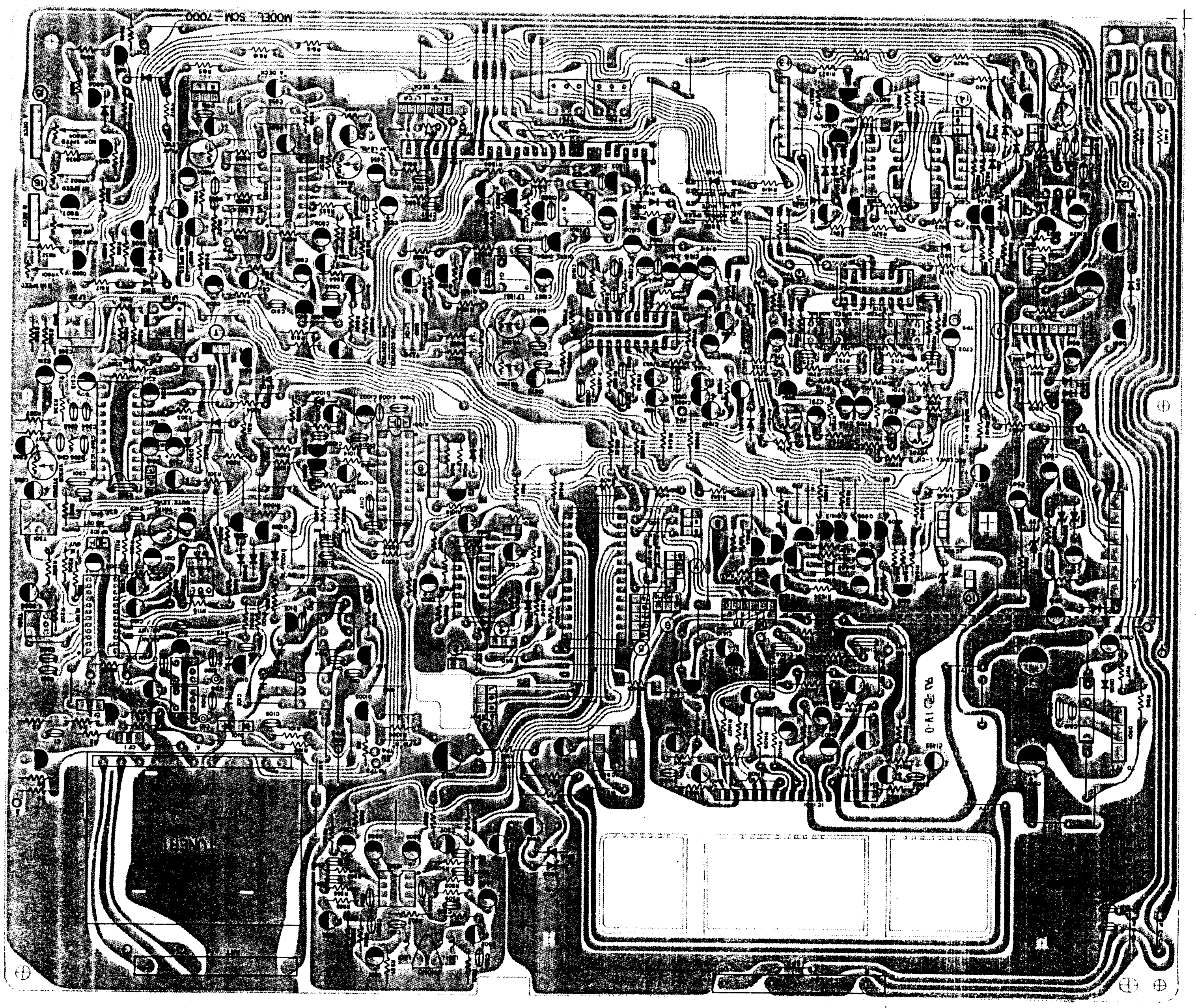
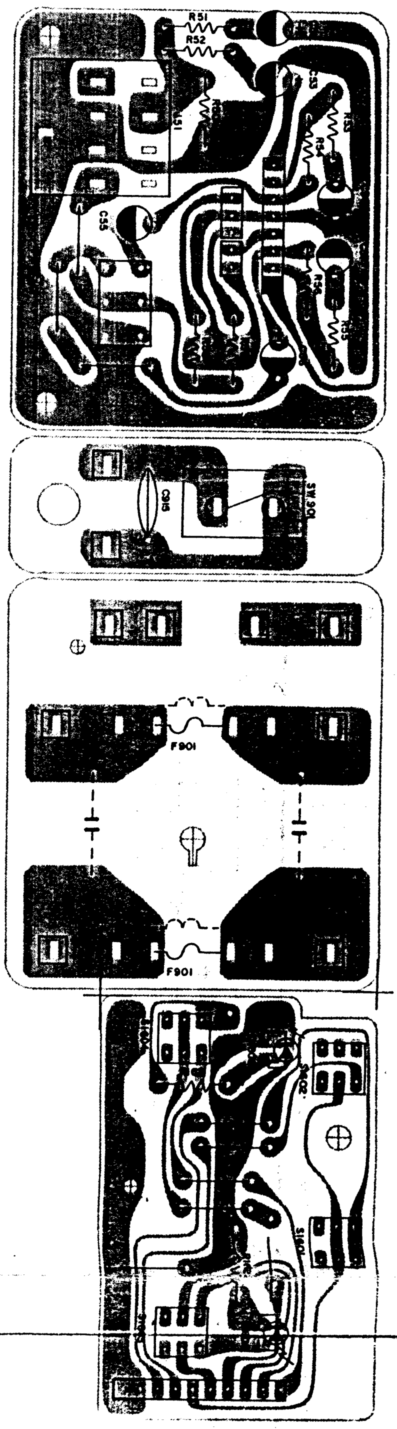
2. ALL CAPACITANCE VALUES ARE INDICATED IN MICRO FARADS, P = PICO FARADS.
3. ELECTROLYTIC CAPACITANCE VALUES ARE CAPACITANCE (μF WORKING VOLTAGE)

MODEL : SCM - 7000





10. IC AND TRANSISTOR VOLTAGE

A. MAIN PART

LOCATION NO.		IC 101 (LA 1267)																
PIN NO.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	14	15	16
VOLTS	FM	1.2	1.6	0	0	2.2	1.5	0	0	0	3.8	3.8	2.5	2.3	2.3	2.3	0	11.2
	MW	1.2	1.5	0	0	1.1	1.5	11.4	2	2	3.7	3.7	1.5	1.1	1.1	1.1	0	11.2
PIN NO.	FM	17	18	19	20	21	22	23	24									
VOLTS	FM	11.2	11.2	11.2	10.4	3.4	3	1.6	0									
	MW	11.2	11.2	11.2	10.5	3.5	3	1.5	0									

LOCATION NO.		IC 301 (LA 3400)																					
PIN NO.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
VOLTS	FM	3.2	3.2	3.2	3,2	4	3.2	3.2	4	3	0	0	0	10.4	4.4	0	3	5.4	0	3.5	4.8	1.8	11.4
	MW	3.2	3.2	3.3	3.2	4	3.2	3.2	4	3.1	10.3	0	0	10.4	0	0	3	6.4	3.9	3.8	5.8	1.9	11.5

LOCATION NO.		IC 1002 (LM 7000)																			
PIN NO.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VOLTS	FM	1	0	0	0	0	5.6	0	11.3	11.3	0.4	0	0	0	1.4	1.4	5.4	1	1	0	1
	MW	1	0	0	0	0	5.4	0	11.4	0.4	11.4	0	0	1.2	0	5.5	5.5	1	1	0	1.1

LOCATION NO.	IC 801 (LC 7817)																
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
VOLTS (FM)	11.2	0	0	0	0	0	11.8	11.8	0	0	0	0	0	0	0	0	0
PIN NO.	18	19	20	21	22	23	24	25	26	27	28						
VOLTS (FM)	0	0	-12.5	0	-12.5	0	0	-12	0	15	12						

LOCATION NO.	IC 10001 (LC 7030)																		
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
FM (VOLTS)	0	0	4.8	4.8	5.4	5.6	0	0	0	0	0	5	5	5	0	5	0	-19.5	5.4
PIN NO.	20	21	22	23	24	25	26	27	28	30	31	32	33	34	35	36	37	38	39
FM (VOLTS)	0	0	1.8	2.6	-19	-19	-19	-19	- 6	-9.6	-5.4	-10.4	-5.5	-9.5	0.8	0	0	5.2	4.9
PIN NO.	40	41	42																
FM (VOLTS)	5	0	0																

LOCATION NO.	IC 1601 (TA 7719P)																			
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
DOLBY ON PLAY (VOLTS)	5.7	5.7	5.8	5.6	5.7	5.7	5.7	5.4	5.7	0	11.3	1.7	5.4	5.7	5.7	5.7	5.6	5.8	5.7	5.7
DOLBY OFF PLAY (VOLTS)	5.5	5.7	5.8	5.5	5.7	5.7	5.7	5.4	5.7	0	11.3	5.1	5.4	5.7	5.7	5.7	5.5	5.8	5.7	5.5

LOCATION NO.	IC 1601 (TA7719P)																			
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
DOLBY ON RECORD (VOLTS)	5,5	5.7	5.8	5.7	5.7	5.7	5.7	5.4	5.7	0	11.3	8.6	5.4	5.7	5.7	5.7	5.7	5.8	5.7	5.5
DOLBY OFF RECORD (VOLTS)	5.5	5.7	5.8	5.5	5.7	5.7	5.7	5.4	5.7	0	11.3	5	5.4	5.7	5.7	5.5	5.8	5.8	5.7	5.5

LOCATION NO.	IC 701 (LB1213)															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NORMAL RECORD (V)	0	0	7	0	0	7	0	0	0	0	0	0	0	0	0	7
CRO_2 RECORD (V)	0	7.2	7	0	0	7	7.2	0	0	0	0	0	0	0	0	7
High Speed RECORD (V)	11.7	0	0	11.7	11.7	0	0	0	0	0	0	0	0	0	0	0

RECORD

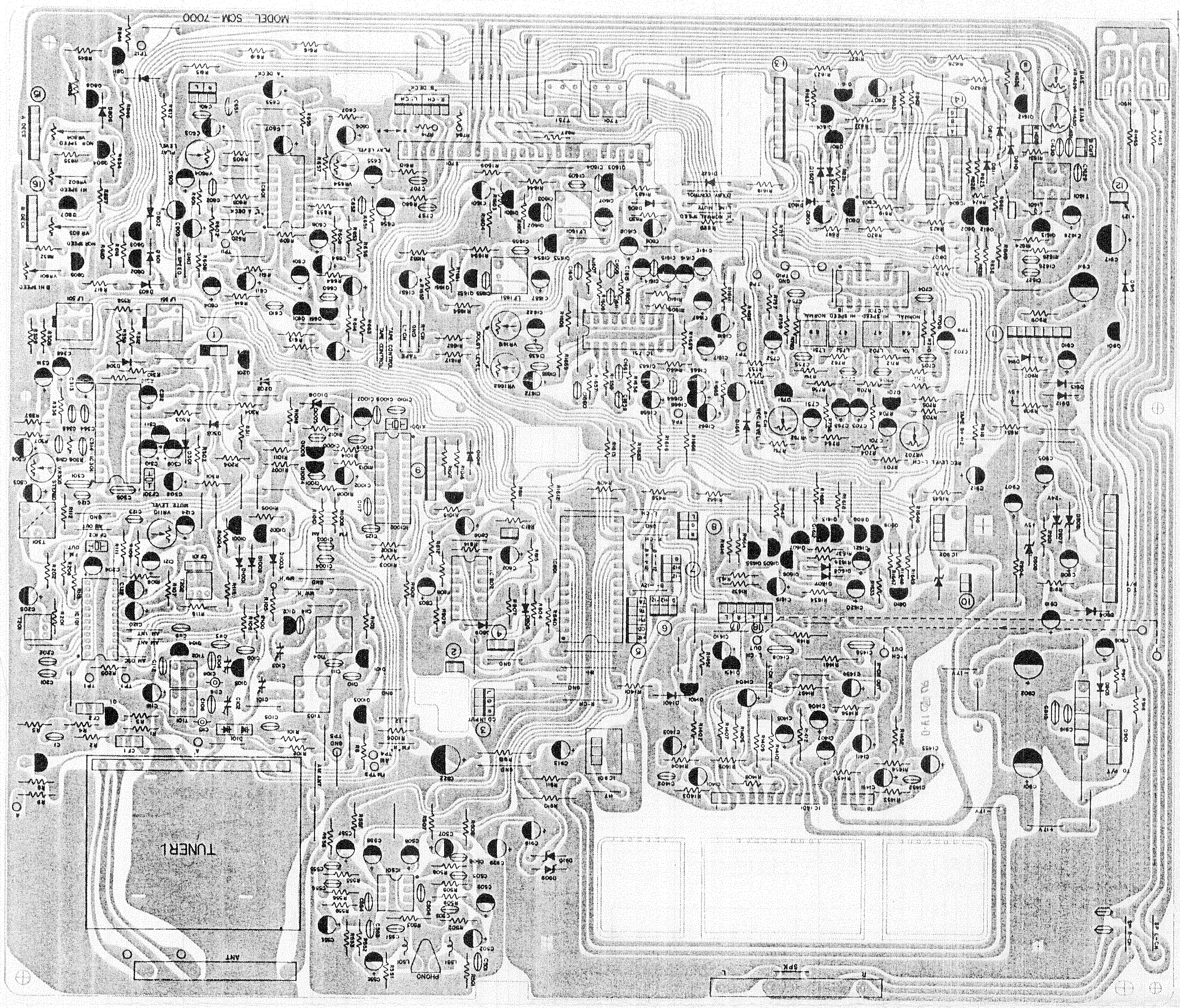
LOCATION NO.		E	B	C
Q602	NOR	0	0	0
	CRO_2	0	0	4.2
Q603	NOR	0	0	0
	CRO_2	0	0	0
Q701		0.8	1.4	4.7
Q751		1	1.5	4.5
Q1604		4.4	4.6	4.8
Q1612				
Q1613				

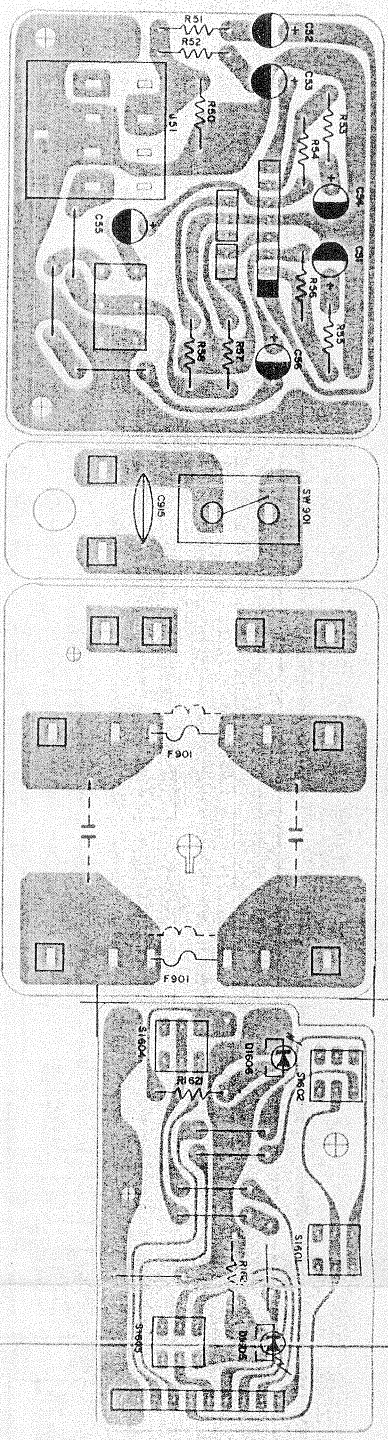
RECORD

LOCATION NO.	E	B	C
Q1601	0	0.3	2.8
Q1607	0	0	4.8
*1608	0	0	0
*1609	0	0	0

HIGH SPEED RECORD

LOCATION NO.	E	B	C
Q601	0.8	1.1	1.8
Q651	0	0.3	0
Q1602	0	0	0
Q1603	0	0	0
Q1652	0	0	0
Q1653	0	0	0





10. IC AND TRANSISTOR VOLTAGE

A. MAIN PART

LOCATION NO.		IC 101 (LA 1267)																
PIN NO.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	14	15	16
VOLTS	FM	1.2	1.6	0	0	2.2	1.5	0	0	0	3.8	3.8	2.5	2.3	2.3	2.3	0	11.2
	MW	1.2	1.5	0	0	1.1	1.5	11.4	2	2	3.7	3.7	1.5	1.1	1.1	1.1	0	11.2
PIN NO.	FM	17	18	19	20	21	22	23	24									
VOLTS	FM	11.2	11.2	11.2	10.4	3.4	3	1.6	0									
	MW	11.2	11.2	11.2	10.5	3.5	3	1.5	0									

LOCATION NO.		IC 301 (LA 3400)																				
PIN NO.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
VOLTS	FM	3.2	3.2	3.2	3,2	4	3.2	3.2	4	3	0	0	0	10.4	4.4	0	3	5.4	0	3.5	4.8	1.8	11.4
	MW	3.2	3.2	3.3	3.2	4	3.2	3.2	4	3.1	10.3	0	0	10.4	0	0	3	6.4	3.9	3.8	5.8	1.9	11.5

LOCATION NO.		IC 1002 (LM 7000)																			
PIN NO.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VOLTS	FM	1	0	0	0	0	5.6	0	11.3	11.3	0.4	0	0	0	1.4	1.4	5.4	1	1	0	1
	MW	1	0	0	0	0	5.4	0	11.4	0.4	11.4	0	0	1.2	0	5.5	5.5	1	1	0	1.1

LOCATION NO.	IC 801 (LC 7817)																
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
VOLTS (FM)	11.2	0	0	0	0	0	11.8	11.8	0	0	0	0	0	0	0	0	0
PIN NO.	18	19	20	21	22	23	24	25	26	27	28						
VOLTS (FM)	0	0	-12.5	0	-12.5	0	0	-12	0	15	12						

LOCATION NO.	IC 10001 (LC 7030)																		
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
FM (VOLTS)	0	0	4.8	4.8	5.4	5.6	0	0	0	0	0	5	5	5	0	5	0	-19.5	5.4
PIN NO.	20	21	22	23	24	25	26	27	28	30	31	32	33	34	35	36	37	38	39
FM (VOLTS)	0	0	1.8	2.6	-19	-19	-19	-19	-6	-9.6	-5.4	-10.4	-5.5	-9.5	0.8	0	0	5.2	4.9
PIN NO.	40	41	42																
FM (VOLTS)	5	0	0																

LOCATION NO.	IC 1601 (TA 7719P)																			
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
DOLBY ON PLAY (VOLTS)	5.7	5.7	5.8	5.6	5.7	5.7	5.7	5.4	5.7	0	11.3	1.7	5.4	5.7	5.7	5.7	5.6	5.8	5.7	5.7
DOLBY OFF PLAY (VOLTS)	5.5	5.7	5.8	5.5	5.7	5.7	5.7	5.4	5.7	0	11.3	5.1	5.4	5.7	5.7	5.7	5.5	5.8	5.7	5.5

LOCATION NO.	IC 1601 (TA7719P)																			
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
DOLBY ON RECORD (VOLTS)	5,5	5.7	5.8	5.7	5.7	5.7	5.7	5.4	5.7	0	11.3	8.6	5.4	5.7	5.7	5.7	5.7	5.8	5.7	5.5
DOLBY OFF RECORD (VOLTS)	5.5	5.7	5.8	5.5	5.7	5.7	5.7	5.4	5.7	0	11.3	5	5.4	5.7	5.7	5.5	5.8	5.8	5.7	5.5

LOCATION NO.	IC 701 (LB1213)															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NORMAL RECORD (V)	0	0	7	0	0	7	0	0	0	0	0	0	0	0	0	7
CRO_2 RECORD (V)	0	7.2	7	0	0	7	7.2	0	0	0	0	0	0	0	0	7
High Speed RECORD (V)	11.7	0	0	11.7	11.7	0	0	0	0	0	0	0	0	0	0	0

RECORD

LOCATION NO.		E	B	C
Q602	NOR	0	0	0
	CRO_2	0	0	4.2
Q603	NOR	0	0	0
	CRO_2	0	0	0
Q701		0.8	1.4	4.7
Q751		1	1.5	4.5
Q1604		4.4	4.6	4.8
Q1612				
Q1613				

RECORD

LOCATION NO.	E	B	C
Q1601	0	0.3	2.8
Q1607	0	0	4.8
*1608	0	0	0
*1609	0	0	0

HIGH SPEED RECORD

LOCATION NO.	E	B	C
Q601	0.8	1.1	1.8
Q651	0	0.3	0
Q1602	0	0	0
Q1603	0	0	0
Q1652	0	0	0
Q1653	0	0	0

2. ALIGNMENT PROCEDURE

A. TUNER SECTION

MW(AM) IF ADJUSTMENT

STEP	SIGNAL SOURCE CONNECT TO	SET SIGNAL TO	ALIGNMENT INDICATOR CONNECT TO	SET TUNING TO	ADJUST	ADJUST FOR
1	AM IF SWEEP GEN. AM EXT. ANT.	SWEEP CENTERED	OSCILLOSCOPE AM DET. OUTPUT OR SPEAKER TERMINAL	522	T202	MAXIMUM GAIN AND SYMMETRY

MW (AM) RF ADJUSTMENT

STEP	SIGNAL SOURCE CONNECT TO	SET SIGNAL TO	ALIGNMENT INDICATOR CONNECT TO	SET TUNING TO	ADJUST	ADJUST FOR
1	AM SIGNAL GEN. AM LOOP ANT	5.22 KHz (MODULATED)	V.T.V.M TEST POINT TP4	522 KHz (LOW END)	T101 (AM OSC COIL)	0.8V ± 0.05
2		1611 KHz (MODULATED)		1611KHz (HIGH END)	C102(AM OSC TRIMMER)	9V ±0.05
3	REPEAT STEPS 1 AND 2 TO OBTAIN FREQUENCY RANGE					
4	AM LOOP ANT	603KHz (MODULATED)	AM DET. OUTPUT OR SPEAKER TERMINAL	603KHz	T103 (AM ANT COIL)	MAXIMUM GAIN
5		1403KHz (MODULATED)	AM DET OUTPUT OR SPEAKER TERMINAL	1403KHz	C101 (AM ANT TRIMMER	MAXIMUM GAIN
6	REPEAT STEPS 4 AND 5 TO MINIMIZE TRACKING ERROR AND ALSO STEP 3 IF NECESSARY.					

FM IF ADJUSTMENT

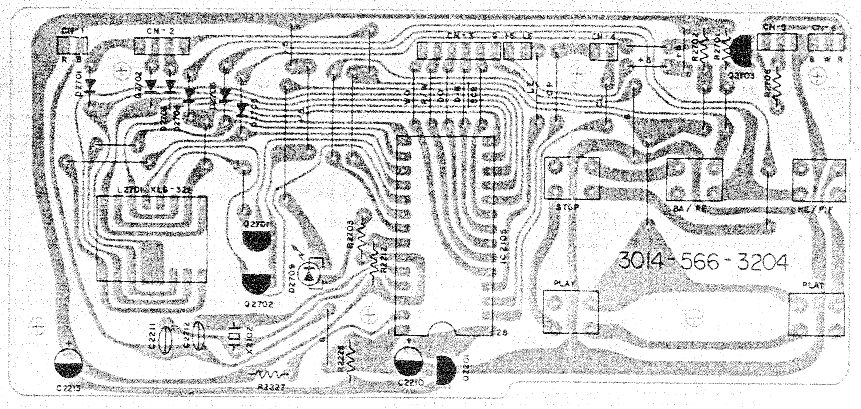
STEP	SIGNAL SOURCE CONNECT TO	SET SIGNAL TO	ALIGNMENT INDICATOR CONNECT TO	SET TUNING TO	ADJUST	ADJUST FOR
1	FM-IF SWEEP GEN FM IF INPUT	SWEEP CENTERED 10.7MHz	OSCILLOSCOPE FM DET. OUTPUT OR SPEAKER TERMINAL	87.5 MHz	T201	MAXIMUM OUTPUT AND SYMMETRY

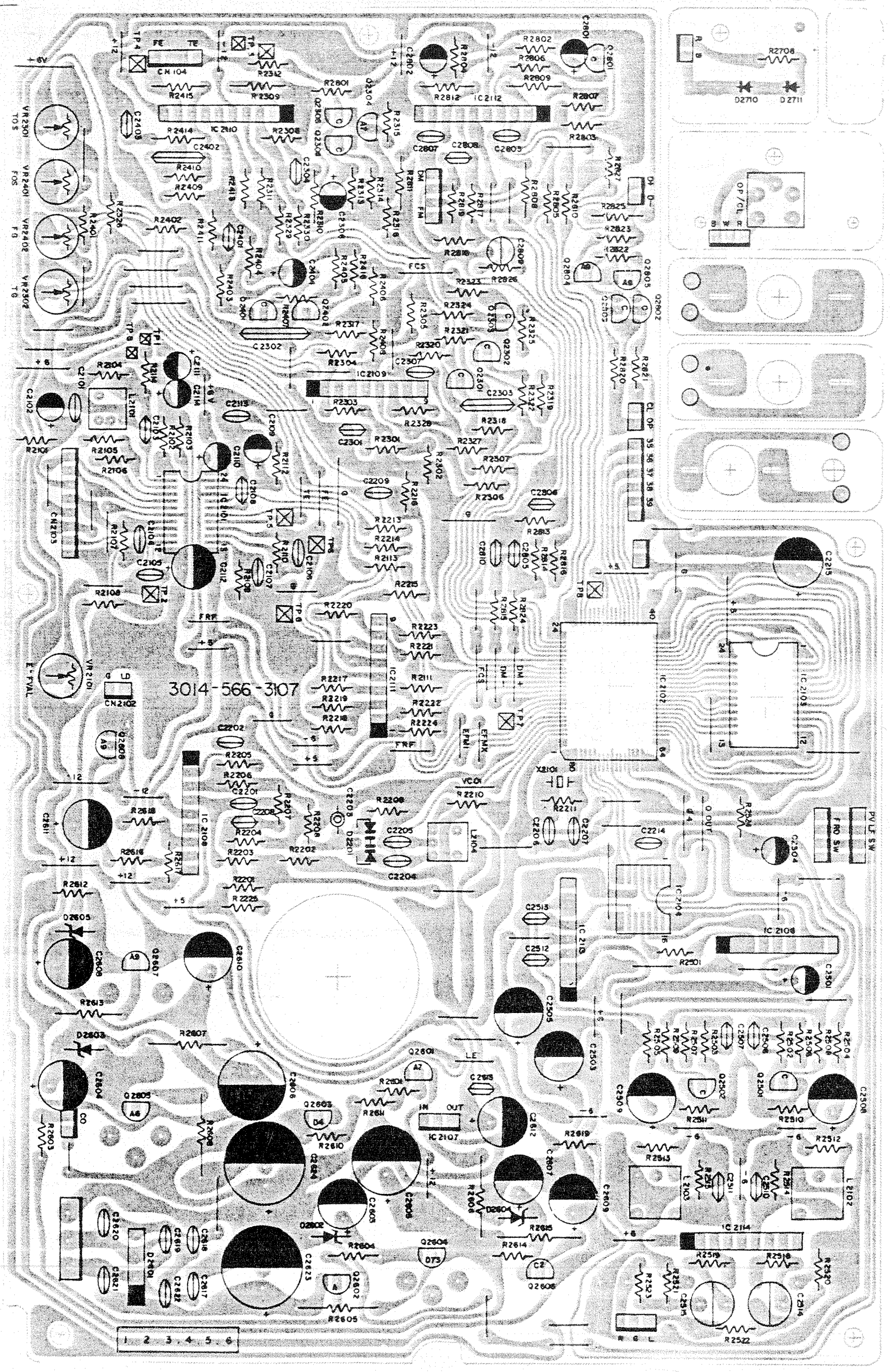
FM RF ADJUSTMENT

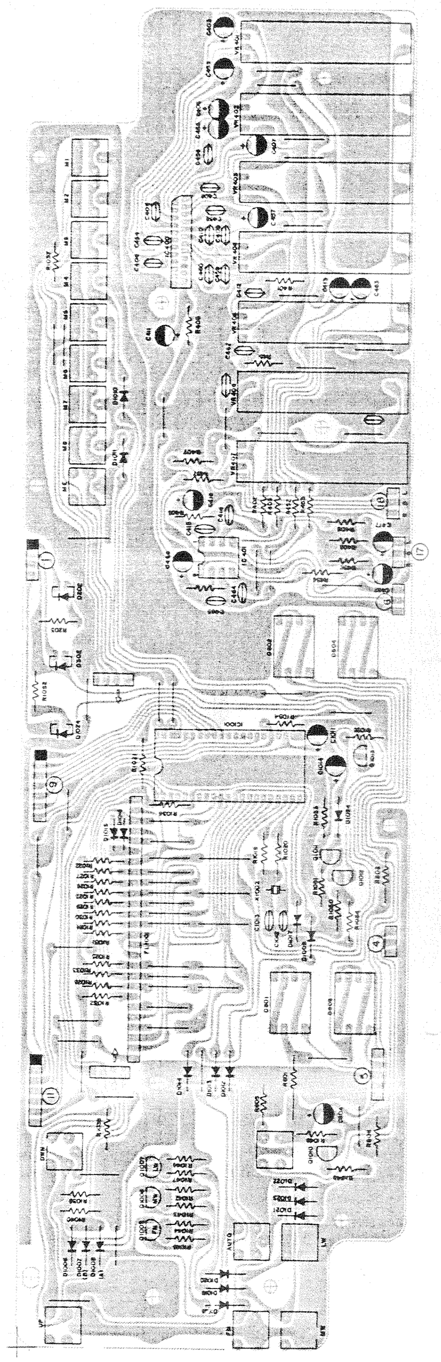
STEP	SIGNAL SOURCE CONNECT TO	SET SIGNAL TO	ALIGNMENT INDICATOR CONNECT TO	SET TUNING TO	ADJUST	ADJUST FOR
1	FM SIGNAL GEN. FM ANTE TERMINAL	87.5MHz (MODULATED)	V.T.V.M. FM FROT END "B_2"	87.5MHz (LOW END)	L4	1.5V±0.1
2		108MHz (MODULATED)		108MHz (HIGH END)		NOT USE
3	REPEAT STEPS 1 AND 2 TO OBTAIN FREQUENCY RANGE.					
4	FM ANT TERMINAL	90MHz (MODULATED)	FM DET. OUTPUT OR SPEAKER TERMINAL	90 MHz	L1 L2 L3	MAXIMUM GAIN
5		106MHz (MODULATED)	FM DET. OUTPUT OR SPEAKER TERMINAL	106MHz	C1, 2, 3 FM RF TRIMMER	MAXIMUM GAIN
6	REPEAT STEPS 4 AND 5 TO MINIMIZE TRACKING ERROR AND STEP 3 IF NECESSARY					

LW RF ADJUSTMENT

STEP	SIGNAL SOURCE CONNECT TO	SET SIGNAL TO	ALIGNMENT INDICATOR CONNECT TO	SET TUNING TO	ADJUST	ADJUST FOR
1	AM SIGNAL GEN. AM LOOP ANT.	153KHz (MODULATED)	V.T.V.M TEST POINT TP 4	153KHz (LOW END)	T102 (LW OSC COIL)	0.8V ±0.05
2		360KHz (MODULATED)		360KHz (HIGH END)	C104 (LW OSC TRIMMER)	9V ±0.05
3	REPEAT STEPS 1 AND 2 TO OBTAIN FREQUENCY RANGE.					
4	AM LOOP ANT.	175KHz (MODULATED)	AM DET. OUTPUT OR SPEAKER TERMINAL	175KHz	T104 (LW ANT COIL)	MAXIMUM GAIN
5		320KHz (MODULATED)	AM DET. OUTPUT OR SPEAKER TERMINAL	320KHz	C103 (LW ANT TRIMMER)	
6	REPEAT STEPS 4 AND 5 TO MINIMIZE TRACKING ERROR AND ALSO STEP 3 IF NCESSSARY.					







2. ALIGNMENT PROCEDURE

A. TUNER SECTION

MW(AM) IF ADJUSTMENT

STEP	SIGNAL SOURCE CONNECT TO	SET SIGNAL TO	ALIGNMENT INDICATOR CONNECT TO	SET TUNING TO	ADJUST	ADJUST FOR
1	AM IF SWEEP GEN. AM EXT. ANT.	SWEEP CENTERED	OSCILLOSCOPE AM DET. OUTPUT OR SPEAKER TERMINAL	522	T202	MAXIMUM GAIN AND SYMMETRY

MW (AM) RF ADJUSTMENT

STEP	SIGNAL SOURCE CONNECT TO	SET SIGNAL TO	ALIGNMENT INDICATOR CONNECT TO	SET TUNING TO	ADJUST	ADJUST FOR
1	AM SIGNAL GEN. AM LOOP ANT	5.22 KHz (MODULATED)	V.T.V.M TEST POINT TP4	522 KHz (LOW END)	T101 (AM OSC COIL)	0.8V ± 0.05
2		1611 KHz (MODULATED)		1611KHz (HIGH END)	C102(AM OSC TRIMMER)	9V ±0.05
3	REPEAT STEPS 1 AND 2 TO OBTAIN FREQUENCY RANGE					
4	AM LOOP ANT	603KHz (MODULATED)	AM DET. OUTPUT OR SPEAKER TERMINAL	603KHz	T103 (AM ANT COIL)	MAXIMUM GAIN
5		1403KHz (MODULATED)	AM DET OUTPUT OR SPEAKER TERMINAL	1403KHz	C101 (AM ANT TRIMMER	MAXIMUM GAIN
6	REPEAT STEPS 4 AND 5 TO MINIMIZE TRACKING ERROR AND ALSO STEP 3 IF NECESSARY.					

FM IF ADJUSTMENT

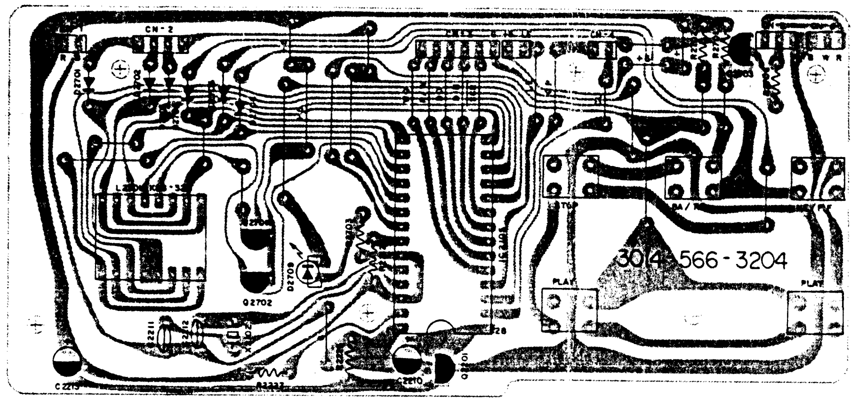
STEP	SIGNAL SOURCE CONNECT TO	SET SIGNAL TO	ALIGNMENT INDICATOR CONNECT TO	SET TUNING TO	ADJUST	ADJUST FOR
1	FM-IF SWEEP GEN FM IF INPUT	SWEEP CENTERED 10.7MHz	OSCILLOSCOPE FM DET. OUTPUT OR SPEAKER TERMINAL	87.5 MHz	T201	MAXIMUM OUTPUT AND SYMMETRY

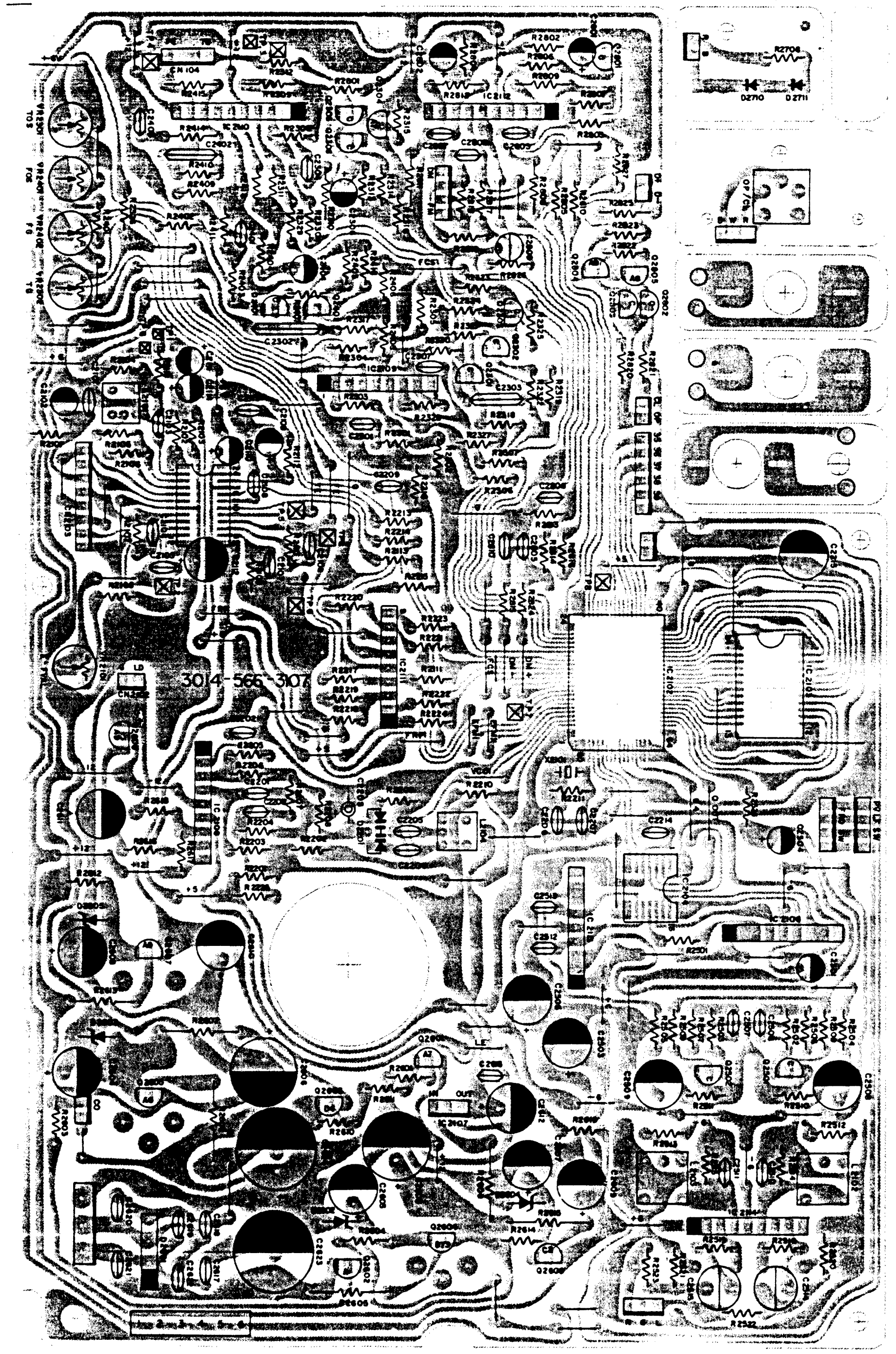
FM RF ADJUSTMENT

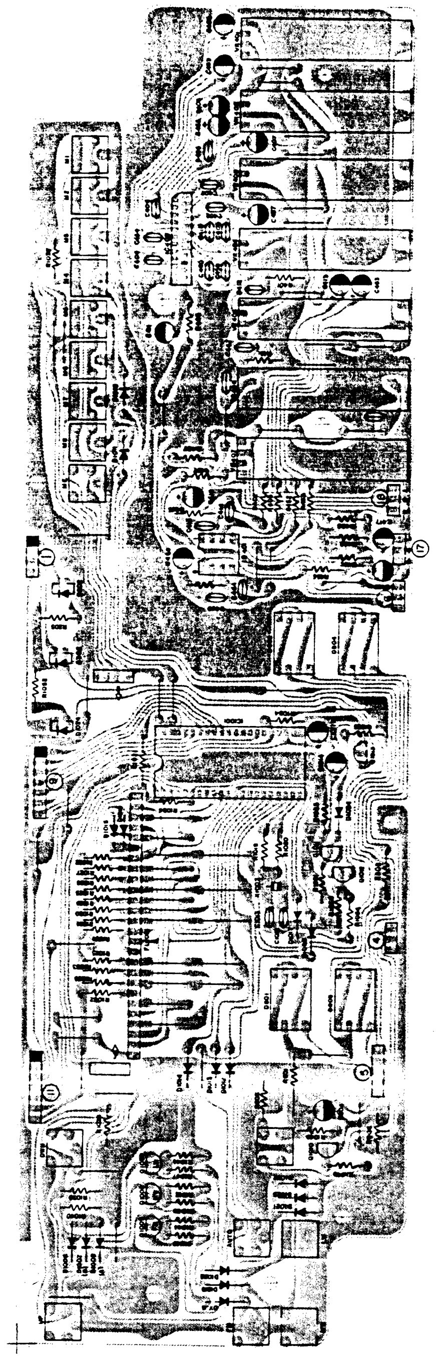
STEP	SIGNAL SOURCE CONNECT TO	SET SIGNAL TO	ALIGNMENT INDICATOR CONNECT TO	SET TUNING TO	ADJUST	ADJUST FOR
1	FM SIGNAL GEN. FM ANTE TERMINAL	87.5MHz (MODULATED)	V.T.V.M. FM FROT END "B_2"	87.5MHz (LOW END)	L4	1.5V±0.1
2		108MHz (MODULATED)		108MHz (HIGH END)		NOT USE
3	REPEAT STEPS 1 AND 2 TO OBTAIN FREQUENCY RANGE.					
4	FM ANT TERMINAL	90MHz (MODULATED)	FM DET. OUTPUT OR SPEAKER TERMINAL	90 MHz	L1 L2 L3	MAXIMUM GAIN
5		106MHz (MODULATED)	FM DET. OUTPUT OR SPEAKER TERMINAL	106MHz	C1, 2, 3 FM RF TRIMMER	MAXIMUM GAIN
6	REPEAT STEPS 4 AND 5 TO MINIMIZE TRACKING ERROR AND STEP 3 IF NECESSARY					

LW RF ADJUSTMENT

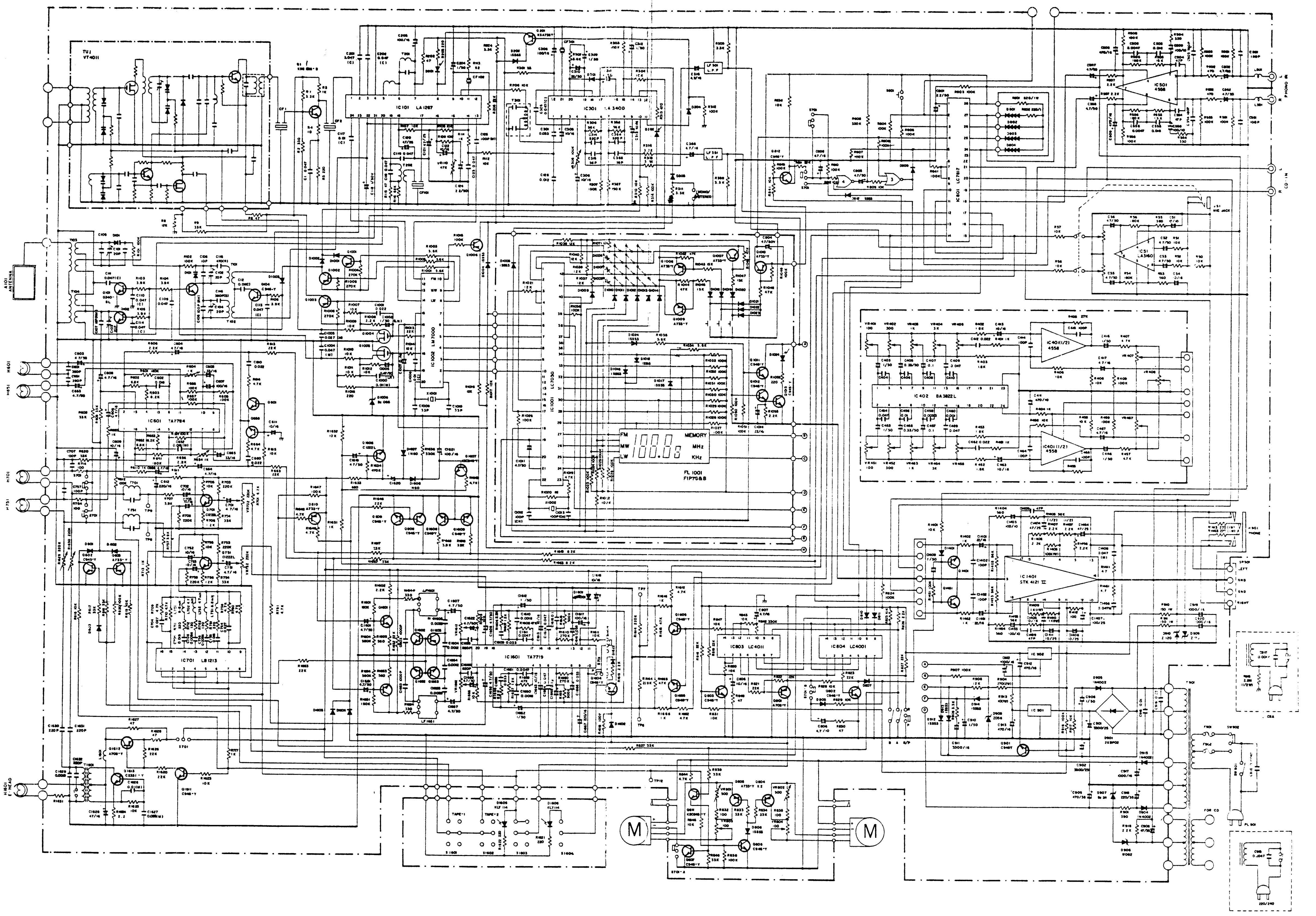
STEP	SIGNAL SOURCE CONNECT TO	SET SIGNAL TO	ALIGNMENT INDICATOR CONNECT TO	SET TUNING TO	ADJUST	ADJUST FOR
1	AM SIGNAL GEN. AM LOOP ANT.	153KHz (MODULATED)	V.T.V.M TEST POINT TP 4	153KHz (LOW END)	T102 (LW OSC COIL)	0.8V ±0.05
2		360KHz (MODULATED)		360KHz (HIGH END)	C104 (LW OSC TRIMMER)	9V ±0.05
3	REPEAT STEPS 1 AND 2 TO OBTAIN FREQUENCY RANGE.					
4	AM LOOP ANT.	175KHz (MODULATED)	AM DET. OUTPUT OR SPEAKER TERMINAL	175KHz	T104 (LW ANT COIL)	MAXIMUM GAIN
5		320KHz (MODULATED)	AM DET. OUTPUT OR SPEAKER TERMINAL	320KHz	C103 (LW ANT TRIMMER)	
6	REPEAT STEPS 4 AND 5 TO MINIMIZE TRACKING ERROR AND ALSO STEP 3 IF NCESSSARY.					







SCHEMATIC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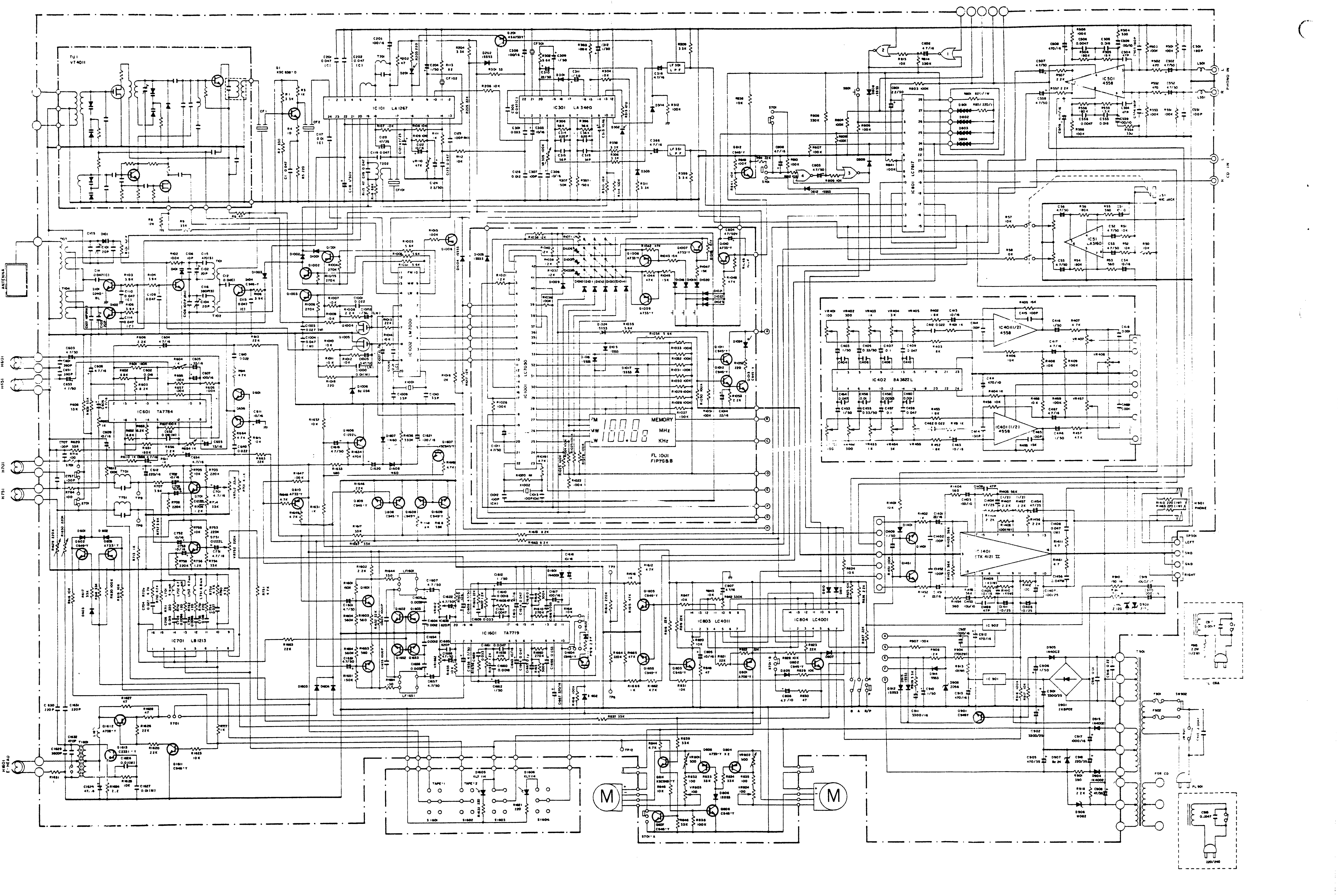
IC101 LA1267
IC301 LA3400
LPF 19K
IC501 4558
PHONO IN
CD IN
IC801 LC7817
MIC JACK
IC51 LA3160
A101 ANTENNA
IC1002 LM7000
IC1001 LC7230
FM
MW
LW
MEMORY
MHz
KHz
FL1001 FIP7SBB
IC601 TA7784
IC701 LB1213
IC402 BA3822L
IC401 (1/2) 4558
IC401 (1/2) 4558
IC1401 STK 4121 II
PHONE
LEFT
RIGHT
IC1601 TA7719
IC803 LC4011
IC804 LC4001
IC902
IC901
T901
M
M
TAPE-1
TAPE-2
S1601
S1602
S1603
S1604
FOR CE


TU1
VT4011
IC101 LA1267
IC301 LA3460
IC501 4558
PHONO IN
CD IN
IC801 LC7817
J51 MIC JACK
IC51 LA3160
A101 ANTENNA
IC1002 LM7000
IC1001 LC7030
MEMORY
MHz
KHz
FM
MW
LW
FL1001
FIP7G8B
IC401(1/2) 4558
IC402 BA3822L
IC601 TA7784
IC701 LB1213
IC1601 TA7719
IC803 LC4011
IC804 LC4001
IC1401
STK 4121 II
PHONE
SP301
LEFT
GND
GND
RIGHT
IC902
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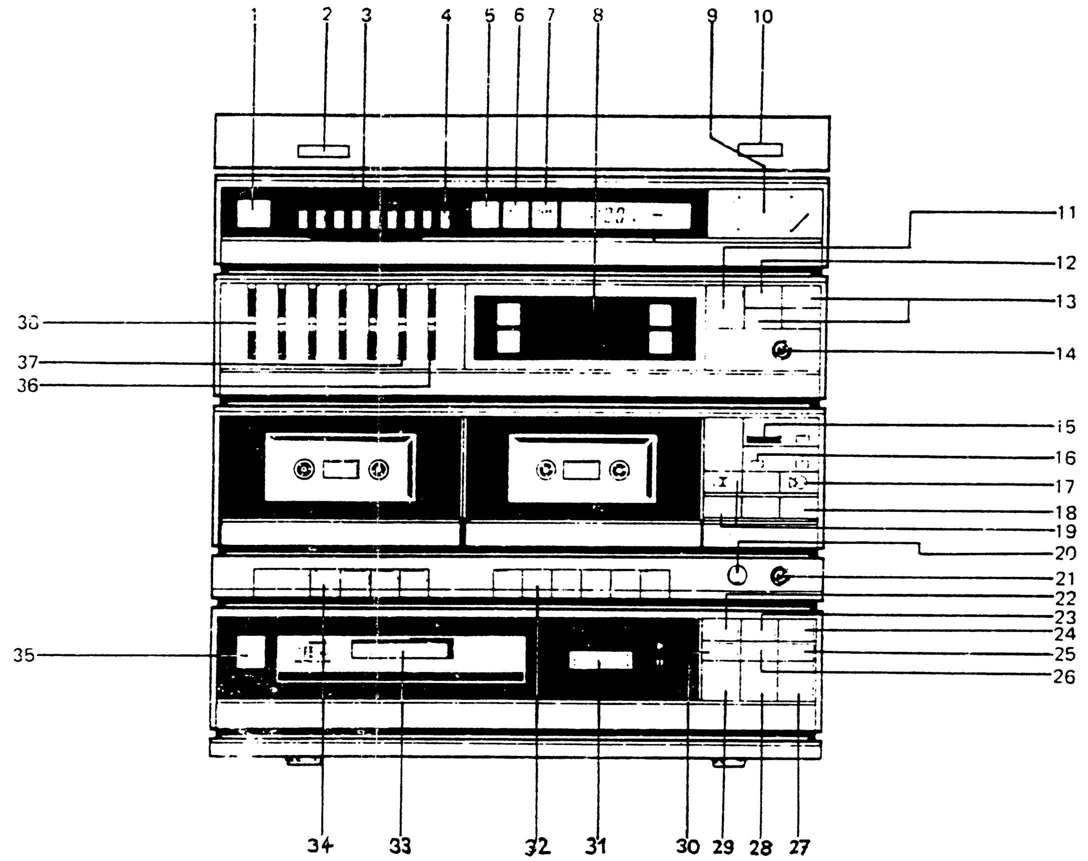
S1601
S1602
S1603
S1604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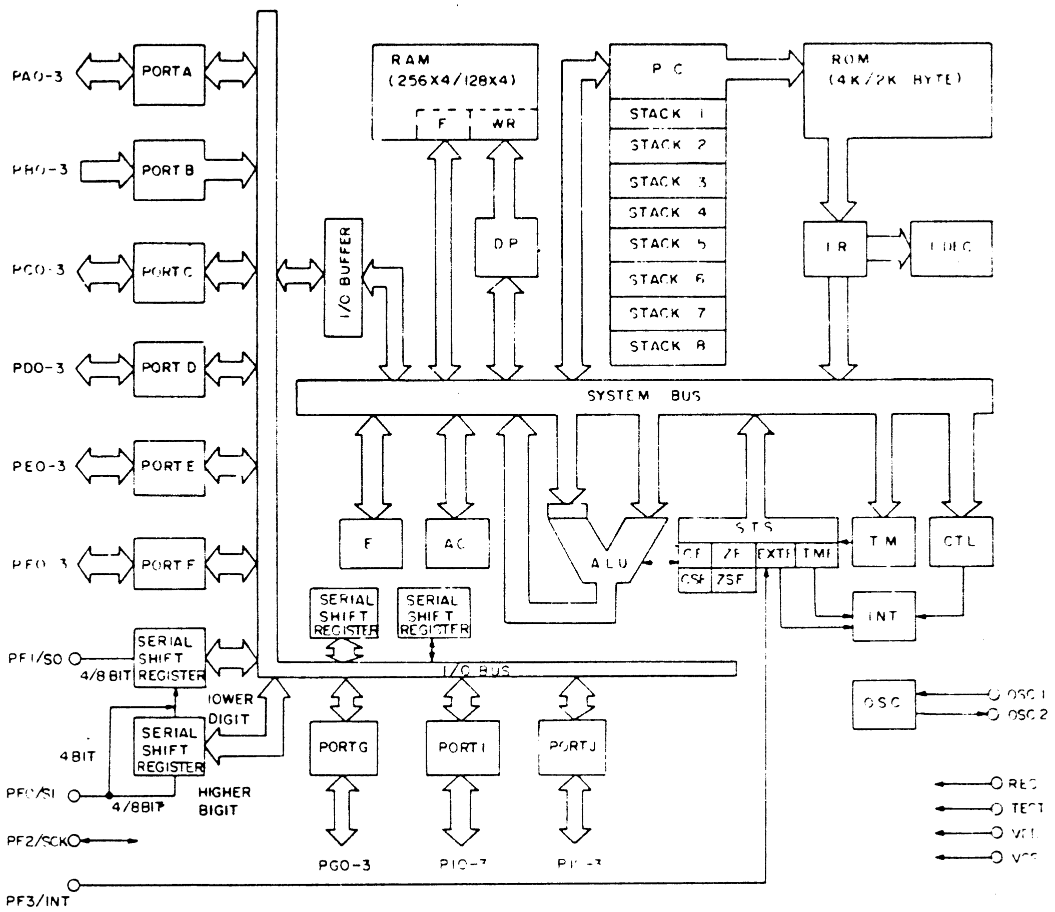
BEDIENUNGSELEMENTE UND FUNKTIONEN

1. POWER; Netzschalter
   Ein/Ausschalten der Anlage
2. SPEED: Geschwindigkeitswahl 33/45 U/min.
3. AM/FM PRESET:
   16 Programmtasten LW/MW/UKW
4. MEMORY; Speichertaste
5. Leuchtanzeige TUNING; exakte Sendereinstellung
6. FM STEREO; Leuchtanzeige UKW
7. SEARCH; Anzeige für automatischen Sendersuchlauf
8. FUNCTIONS-Anzeigefeld
9. TUNING: Senderabstimmung
10. REJECT; unterbricht die Plattenwiedergabe
11. PHONO; Plattenspieler-Wiedergabe
12. SEARCH. Automatischer Sendersuchlauf mit Anzeige (7)
13. Bereichstasten LW – MW – FM = UKW
14. HEADPHONE: Kopfhörerbuchse 6,3 mm
    Stecker schaltet die Lautsprecher ab
15. COUNTER; Bandzählwerk mit Nulltaste
16. Bandsortenwahl-Tasten A – B
17. HI-SPEED-Anzeige
18. HI-SPEED; Verdoppelung der Kopiergeschwindigkeit
19. DOLBY NR; Rauschminderungssystem mit Anzeige
20. MIC MIX VOL; Mikrofonmischregler
21. MIC; Mikrofonbuchse 6,3 mm
22. DISPLAY; SPUR-ZEIT Umschaltung
23. SKIP ⋉⋖; Titelwahl rückwärts
24. SKIP ▷▷I; Titelwahl vorwärts
25. SEARCH ▷▷I; Suchlauf vorwärts
26. SEARCH ⋉⋖; Suchlauf rückwärts
27. STOP/CLEAR;
28. PLAY/PAUSE; Wiedergabe/Pause
29. PROGRAMME; Abspielreihenfolge
30. REPEAT; Wiederholautomatik
31. MULTIFUNCTIONS-Anzeigefeld
32. Laufwerks-Funktionstasten (Laufwerk B)
33. CD-Platten-Schublade
34. Laufwerks-Funktionstasten (Laufwerk A)
35. CD OPEN/CLOSE
    Aus- und Einfahren der Plattenschublade
36. VOLUME; Lautstärkeregler
37. BALANCE; Lautstärkeausgleich links/rechts
38. EQUALIZER; Klang Einstellregler

7. MICROCOMPUTER

A) BLOCK DIAGRAM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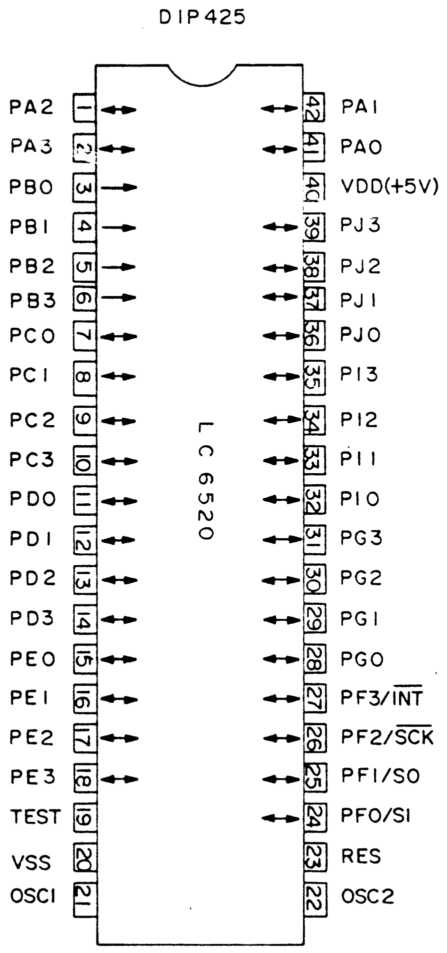
PB0-3
PC0-3
PD0-3
PE0-3
PF0-3
PORT A
PORT B
PORT C
PORT D
PORT E
PORT F
SERIAL SHIFT REGISTER
PF1/SO
4/8 BIT
LOWER DIGIT
4 BIT
PF0/SI
4/8 BIT
HIGHER DIGIT
PF2/SCK
PF3/INT
I/O BUFFER
RAM (256X4/128X4)
F
WR
DP
PC
STACK 1
STACK 2
STACK 3
STACK 4
STACK 5
STACK 6
STACK 7
STACK 8
ROM (4K/2K BYTE)
IR
I DEC
SYSTEM BUS
F
AC
ALU
STS
CF
ZF
EXTF
TMF
CSF
ZSF
TM
CTL
INT
I/O BUS
PORT G
PORT I
PORT J
PG0-3
PI0-3
PJ0-3
OSC
OSC 1
OSC 2
RES
TEST
VDD
VSS

B) PIN ASSIGNMENT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LC 6520
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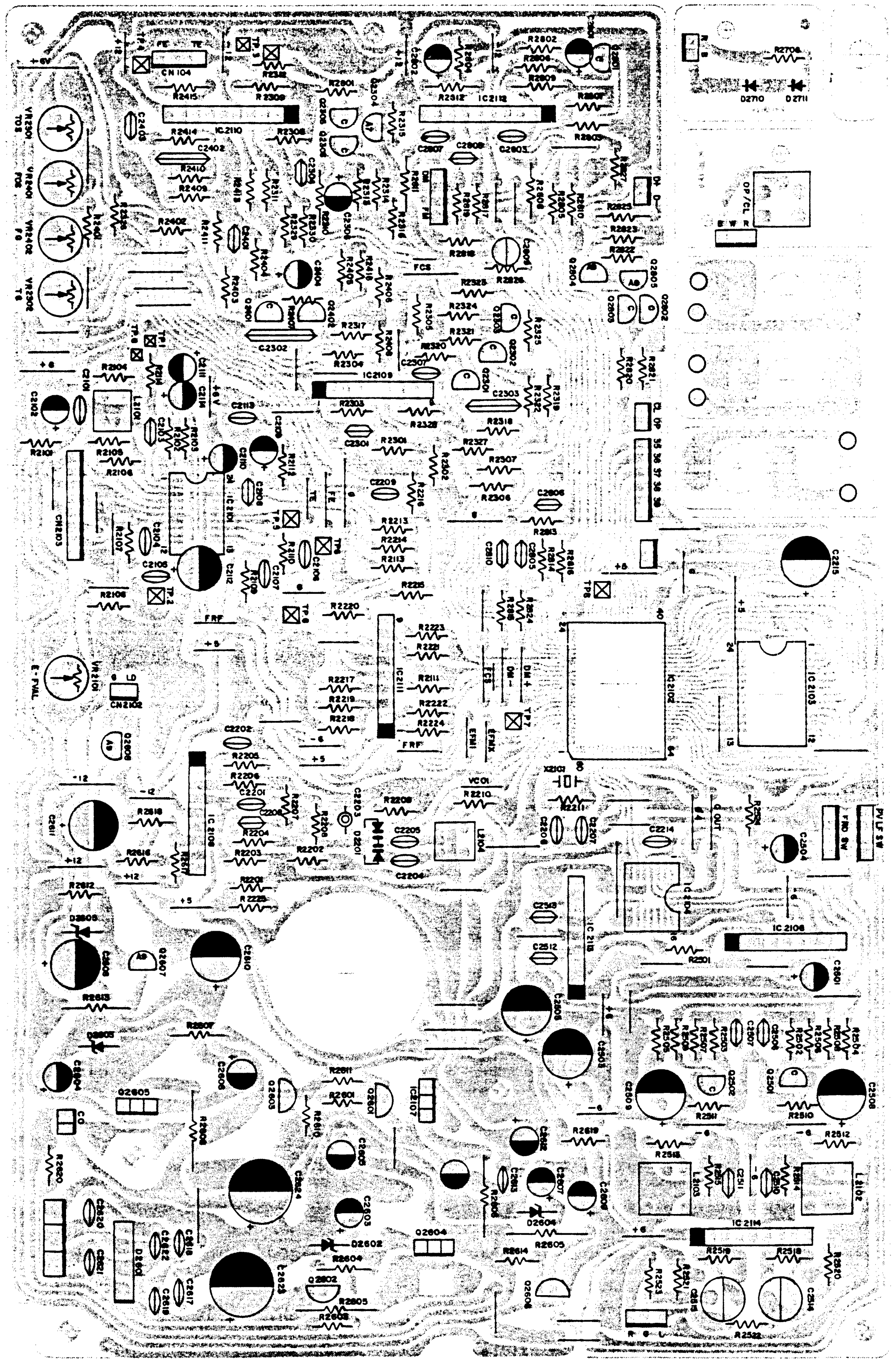
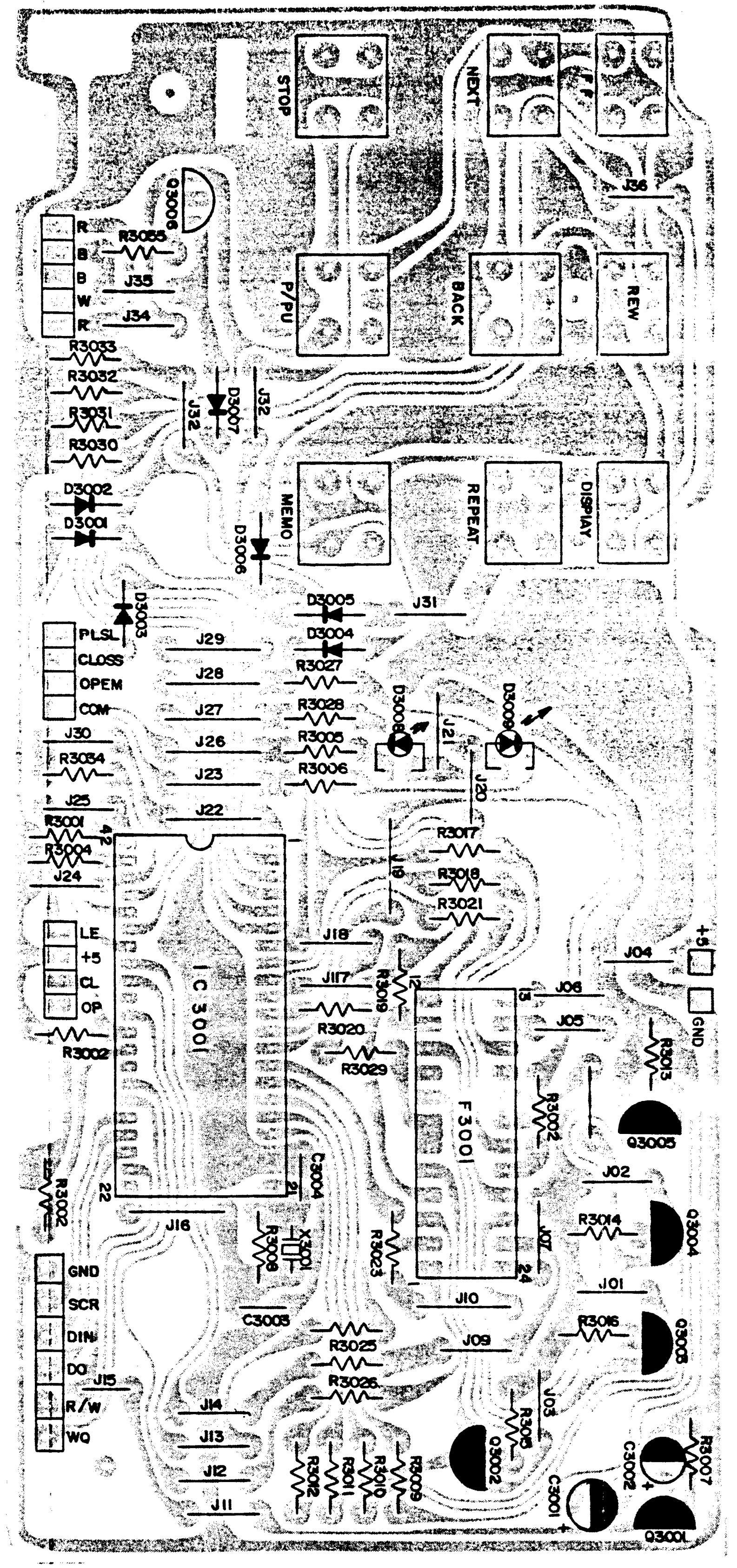
PA3 2
PB0 3
PB1 4
PB2 5
PB3 6
PC0 7
PC1 8
PC2 9
PC3 10
PD0 11
PD1 12
PD2 13
PD3 14
PE0 15
PE1 16
PE2 17
PE3 18
TEST 19
VSS 20
OSC1 21
42 PA1
41 PA0
40 VDD(+5V)
39 PJ3
38 PJ2
37 PJ1
36 PJ0
35 PI3
34 PI2
33 PI1
32 PI0
31 PG3
30 PG2
29 PG1
28 PG0
27 PF3/INT
26 PF2/SCK
25 PF1/SO
24 PF0/SI
23 RES
22 OSC2


CN104
IC2110
IC2112
IC2109
IC2101
IC2111
IC2102
IC2103
IC2108
IC2106
IC2114
IC2107
IC2113
VR2101
VR2301
VR2401
VR2302
VR2402
CN2102
CN2201
FRF
FCS
VCO1
X2101
F/D SW
P/U SW
D2710
D2711
R2706
OP/CL
TP1
TP2
TP3
TP4
TP6
TP7
TP8
+5
+6
-6
+12
-12
C2215
C2301
C2302
C2303
C2809
C2808
C2810
C2825
C2824
R2201
R2202
R2203
R2204
R2205
R2206
R2301
R2302
R2303
R2304
R2305
R2306
R2307
R2401
R2402
R2403
R2404
R2405
R2406
R2407
R2408
R2409
R2410
R2411
R2412
R2413
R2414
R2415
R2501
R2502
R2503
R2504
R2505
R2506
R2507
R2508
R2509
R2510
R2511
R2512
R2518
R2519
R2521
R2522
R2801
R2802
R2803
R2804
R2805
R2806
R2807
R2808
R2809
R2810
R2811
R2812
R2813
R2814
R2815
R2816
Q2601
Q2602
Q2603
Q2604
Q2605
Q2606
Q2607
Q2802
Q2804
Q2805
D2601
D2602
D2603
D2604
D2605
D2606
L2102
L2103
L2104
L2105
L2106
R
L


STOP
NEXT
FF
P/PU
BACK
REW
MEMO
REPEAT
DISPLAY
R
B
B
W
R
R3055
Q3006
J35
J34
J36
J32
J31
J33
R3033
R3032
R3031
R3030
D3002
D3001
D3003
D3007
D3006
D3005
D3004
D3008
D3009
PLSL
CLOSS
OPEM
COM
J29
J28
J27
J26
J23
J22
J30
R3034
J25
R3001
R3004
J24
R3027
R3028
R3005
R3006
J21
J20
J19
J18
J17
J16
J15
J14
J13
J12
J11
J10
J09
J07
J06
J05
J04
J03
J02
J01
R3017
R3018
R3021
R3019
R3020
R3029
R3003
R3002
R3014
R3016
R3008
R3023
R3025
R3026
R3012
R3011
R3010
R3009
R3007
LE
+5
CL
OP
GND
SCR
DIN
DO
R/W
WQ
IC 3001
F 3001
X3001
C3001
C3002
C3003
C3004
Q3001
Q3002
Q3003
Q3004
Q3005
+5
GND
22
21
24
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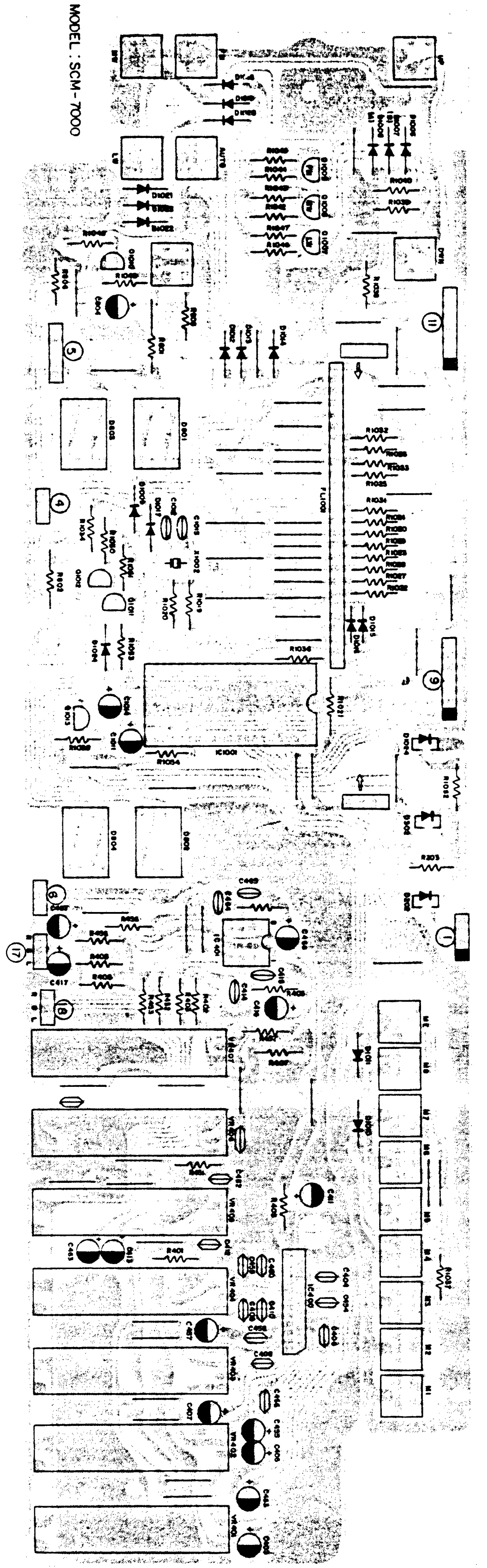
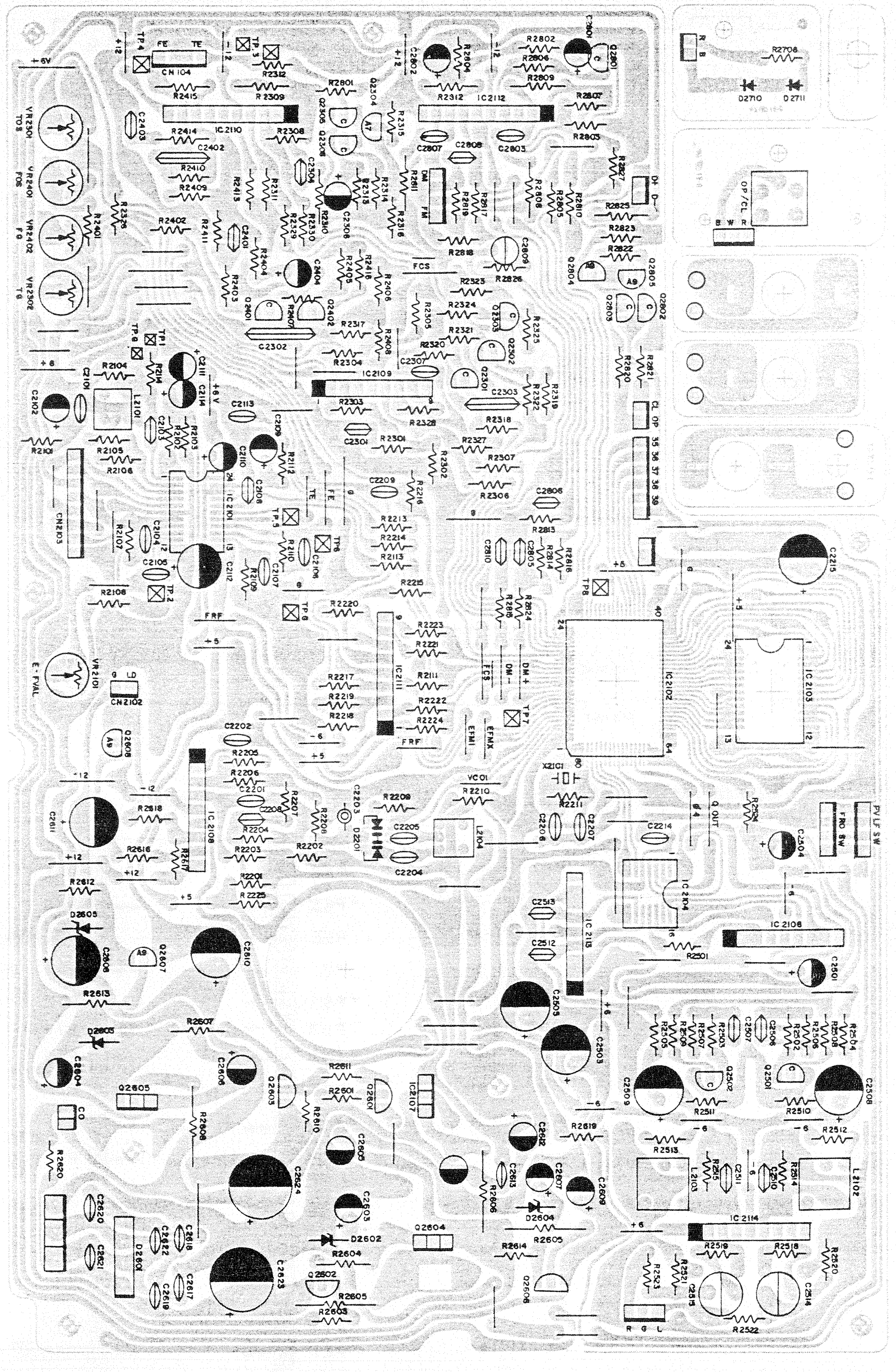
MODEL : SCM-7000


IC1001
IC401
IC403
D1001
D1002
D1003
D1004
D1005
D1006
D1007

MODEL : SCM-7000



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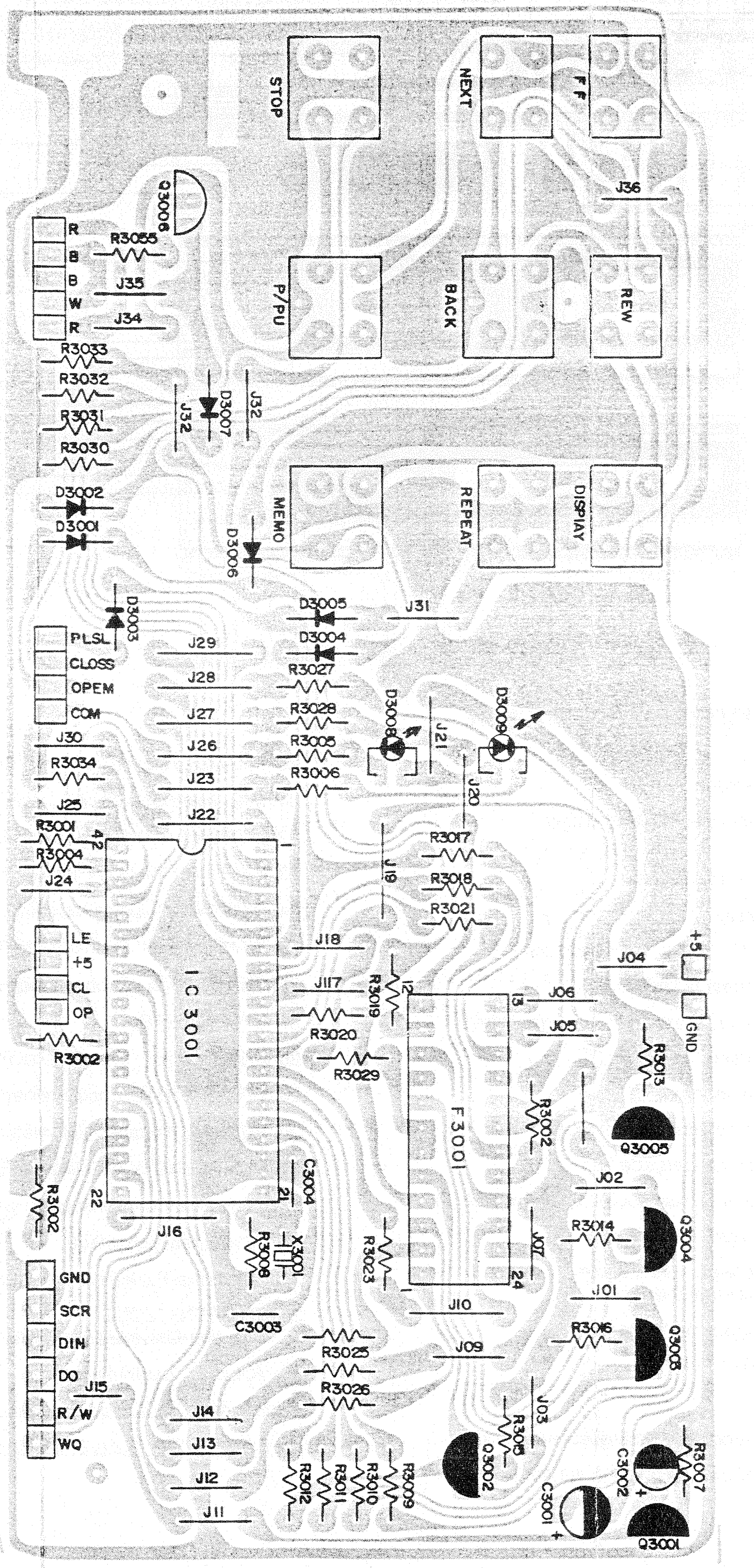
IC2110
IC2112
IC2109
IC2101
IC2111
IC2102
IC2103
IC2108
IC2104
IC2106
IC2105
IC2107
IC2113
IC2114
CN2103
CN2102
VR2301 TDB
VR2401 FOS
VR2402 F O
VR2302 T G
VR2101 E - F.VAL
X2101
VCO1
L2101
L2102
L2103
L2104
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
+5V
+6V
+12
-12
+5
+6
+8
FE
TE
FRF
FCS
EFMX
TES
DM+
DM-
FM
Q OUT
FRD SW
P/U SW
CL OP 35 36 37 38 39
OP/CL
D2710
D2711
R2708
R G L



STOP
NEXT
FF
P/PU
BACK
REW
MEMO
REPEAT
DISPLAY
IC 3001
F 3001
Q3001
Q3002
Q3003
Q3004
Q3005
Q3006
D3001
D3002
D3003
D3004
D3005
D3006
D3007
D3008
D3009
X3001
C3001
C3002
C3003
C3004
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PLSL
CLOSS
OPEM
COM
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SCR
DIN
DO
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GND
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J30
J29
J28
J27
J26
J25
J24
J23
J22
J21
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J19
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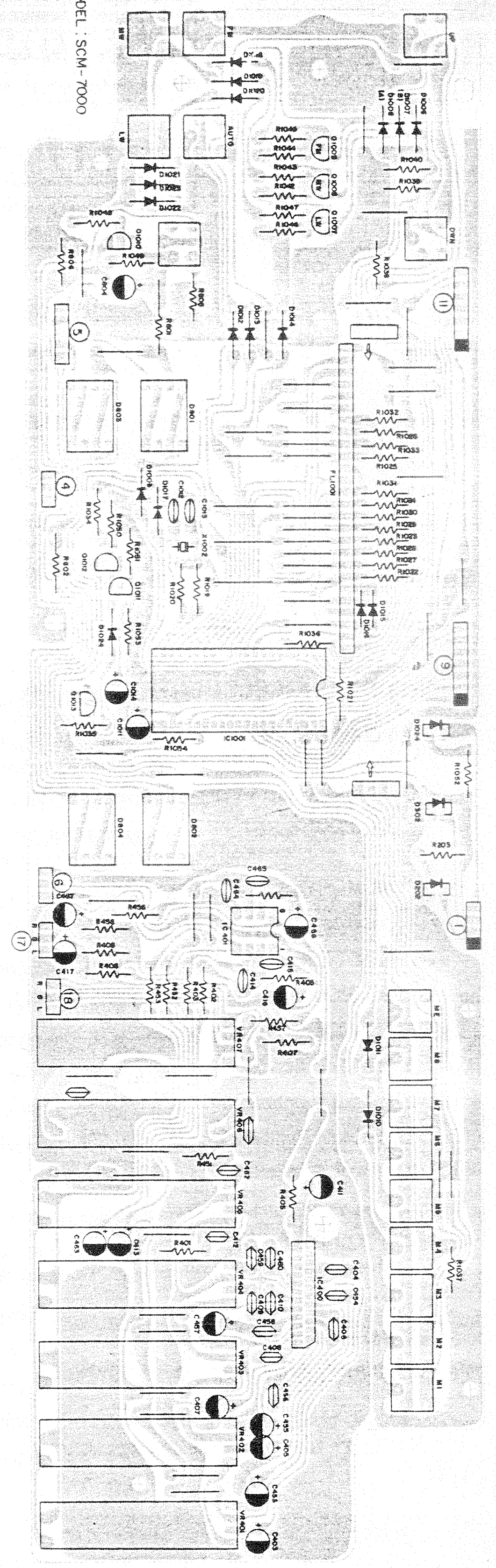
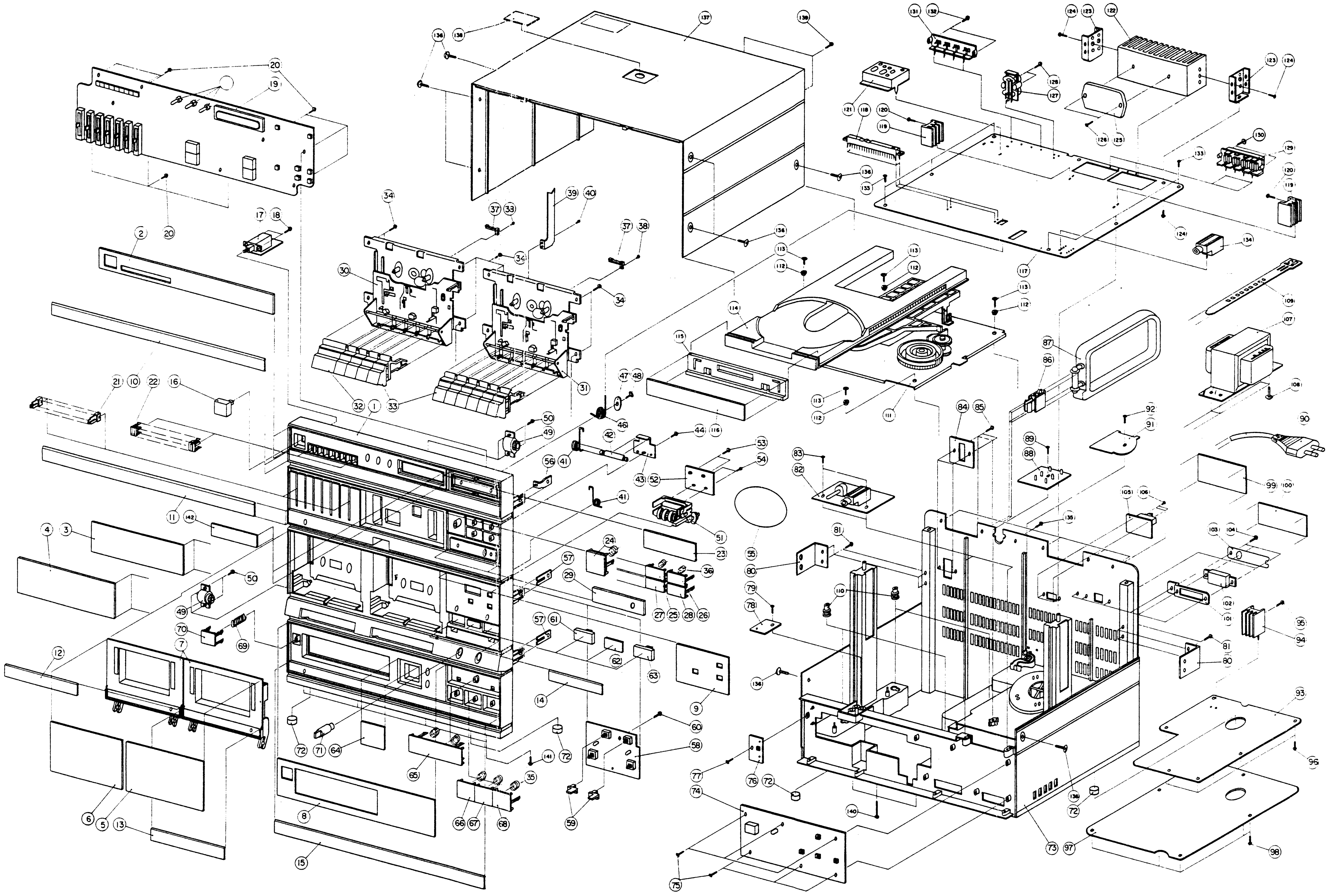
J02
J01



IC1001
IC401
IC402
FL1001

8. EXPLODED VIEW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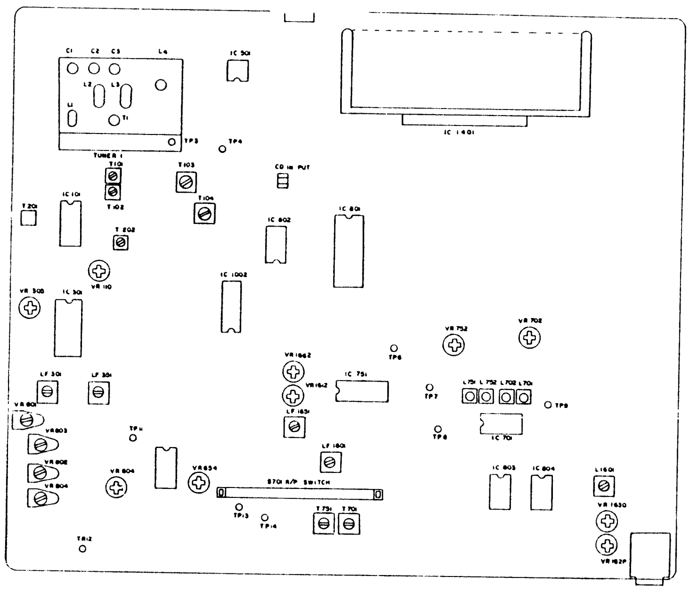
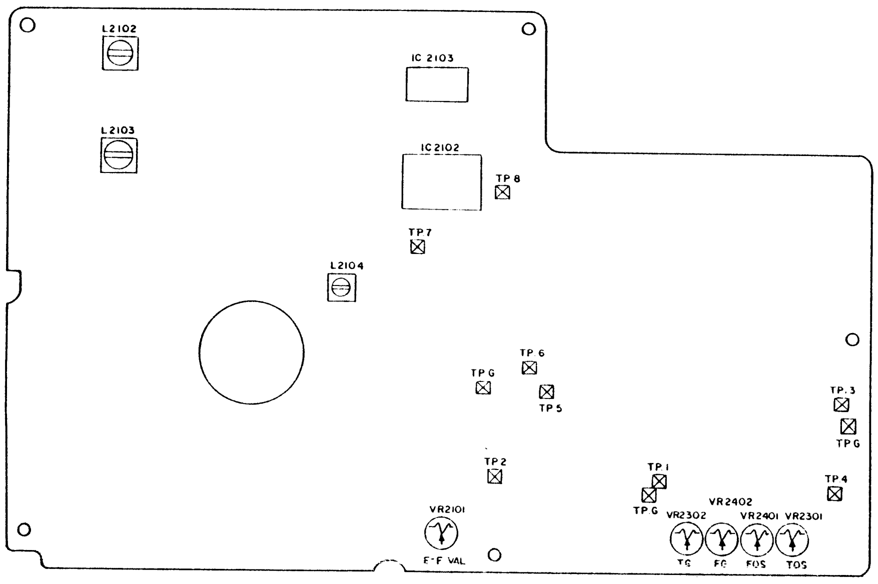
3. ALIGNMENT POINT LOCATION

A. TUNER SECTION AND DECK SECTION



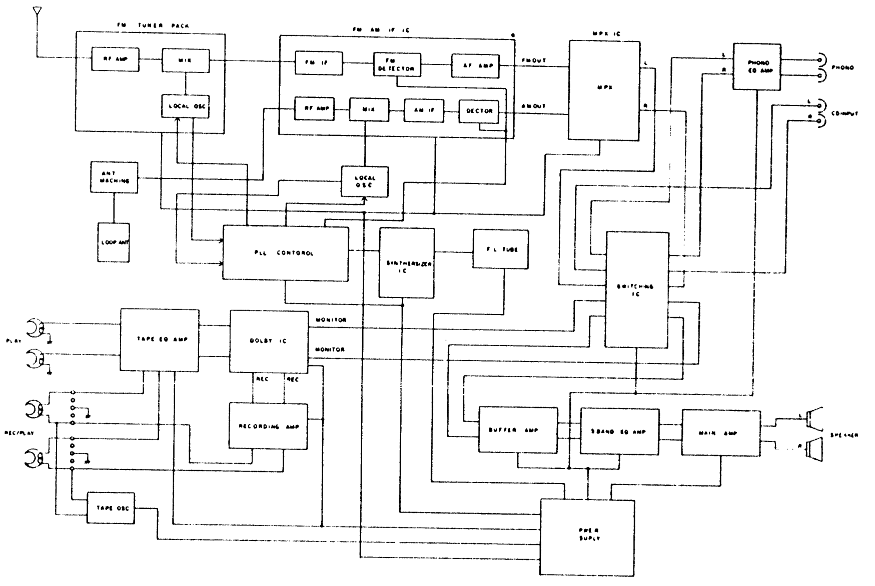
C1
C2
C3
L4
IC 501
IC 1401
TUNER-1
TP3
TP4
T101
T102
T103
T104
T201
T202
IC 101
IC 802
IC 801
IC 1002
VR 110
VR 302
IC 501
VR 752
VR 702
TP6
VR 1602
IC 751
TP7
TP8
IC 701
TP9
VR 604
TP11
S701 R/P SWITCH
IC 803
IC 804
L1601
VR 1603
VR 1602
TP13
TP14
T 751
T 701
TA12

B. CDP SECTION

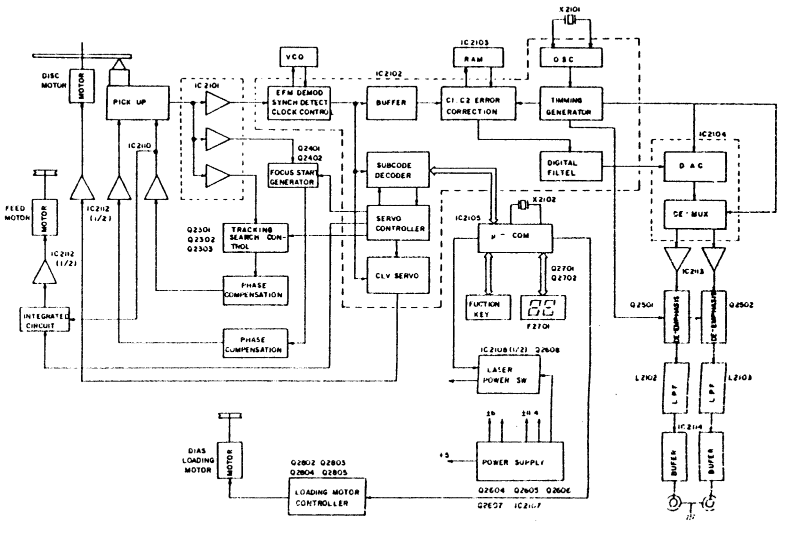


L2102
L2103
IC 2103
IC2102
TP 8
TP7
L2104
TP 6
TP G
TP 5
TP 3
TP G
TP 2
TP 1
TP G
TP 4
VR2402
VR2302
VR2401
VR2301
VR2101
E·F VAL
TG
FG
FOS
TOS

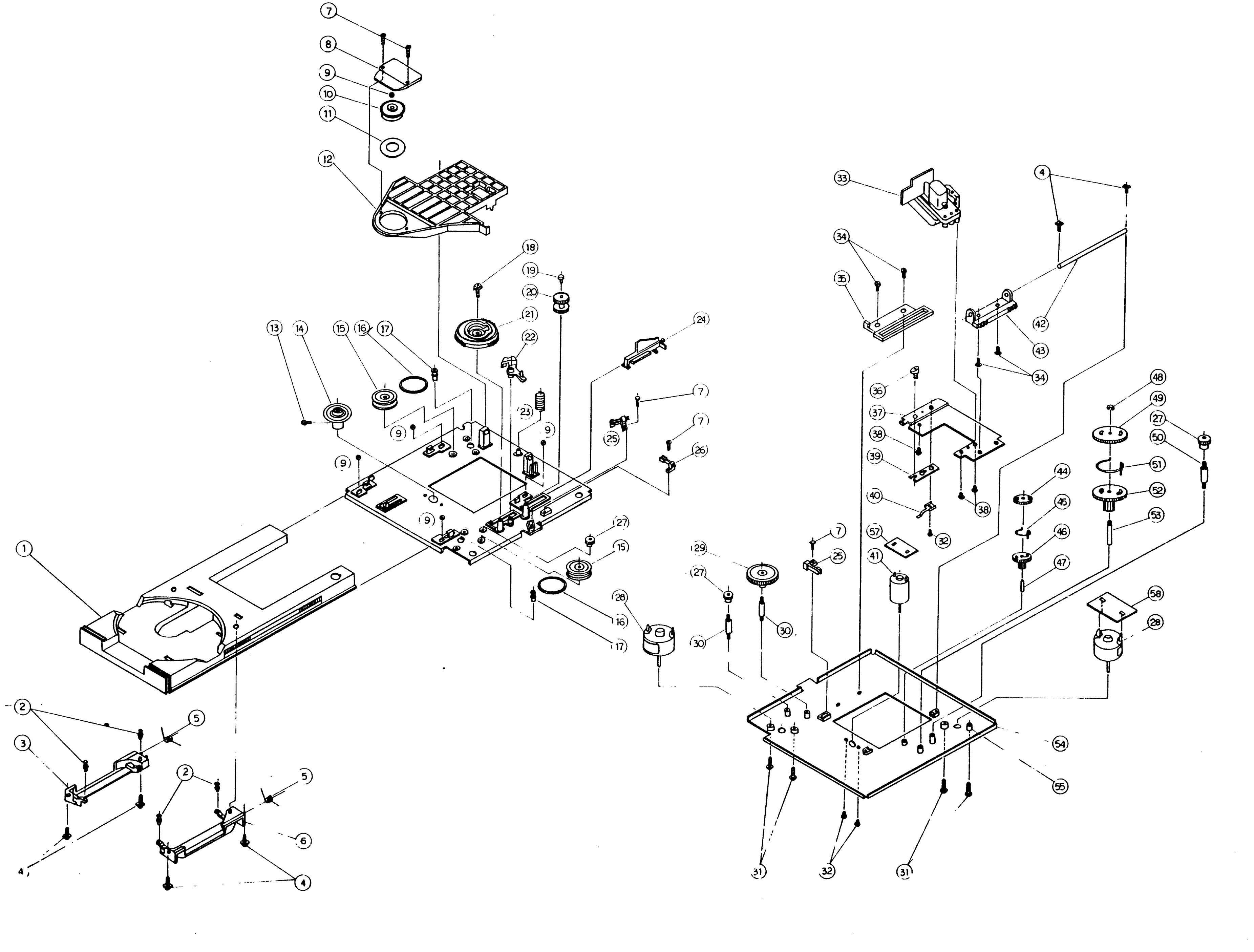
4. BLOCK DIAGRAM



FM TUNER PACK
RF AMP
MIX
LOCAL OSC
FM AM IF IC
FM IF
FM DETECTOR
AF AMP
RF AMP
MIX
AM IF
DECTOR
FMOUT
AMOUT
MPX IC
MPX
L
R
PHONO EQ AMP
PHONO
CD INPUT
ANT MACHING
LOOP ANT
LOCAL OSC
PLL CONTOROL
SYNTHERSIZER IC
F L TUBE
SWITCHING IC
PLAY
TAPE EQ AMP
DOLBY IC
MONITOR
MONITOR
REC
REC
RECORDING AMP
REC/PLAY
TAPE OSC
BUFFER AMP
5BAND EQ AMP
MAIN AMP
SPEAKER
PWER SUPLY



DISC MOTOR
MOTOR
PICK UP
IC 2101
IC2110
IC2112 (1/2)
FEED MOTOR
MOTOR
IC2112 (1/2)
INTEGRATED CIRCUIT
VCO
IC2102
EFM DEMOD SYNCH DETECT CLOCK CONTROL
BUFFER
IC2103
RAM
C1 C2 ERROR CORRECTION
X2101
OSC
TIMMING GENERATOR
Q2401
Q2402
FOCUS START GENERATOR
Q2301
Q2302
Q2303
TRACKING SEARCH CONTHOL
PHASE COMPENSATION
PHASE COMPENSATION
SUBCODE DECODER
SERVO CONTROLLER
CLV SERVO
DIGITAL FILTEL
IC2104
D A C
DE-MUX
X2102
IC2105
μ-COM
Q2701
Q2702
FUCTION KEY
F2701
IC2113
Q2501
Q2502
DE-EMPHASIS
DE-EMPHASIS
IC2108(1/2) Q2608
LASER POWER SW
L2102
L2103
LPF
LPF
IC2114
BUFER
BUFER
±6
±14
+5
POWER SUPPLY
Q2604 Q2605 Q2606
Q2607 IC2107
DIAS LOADING MOTOR
MOTOR
Q2802 Q2803
Q2804 Q2805
LOADING MOTOR CONTROLLER



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